TECHNOLOGY DEPT.

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NEW EQUIPMENT DIGEST

March, 1952
Volume 17—Number 3

A Penton Publication

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CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 16 and 82

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

FLEXIBLE FLUID HOSE
also minimizes vibrations

Both seamless and pressure tight, Uniflex flexible bronze metal hose is made primarily for conveying liquids or gases while withstanding high temperatures, corrosion and abrasion. Hose, which also serves to minimize vibration, is of helical construction to distribute flexing action between inner and outer convolutions. For safety purposes, hose is also produced with covering of one or more layers of tensile bronze wire braid. Current applications are in industrial, chemical, aviation and automotive fields for steam lines, pressure lines and as vibration eliminators. Made by **Titeflex, Inc.**, 548 Frelinghuysen Ave., Newark 5, N. J.

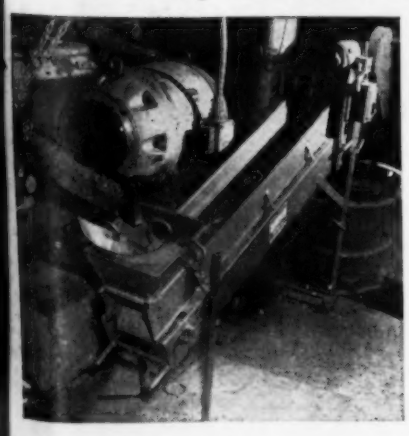
▲ For more details circle **NED-1952** on enclosed inquiry slip ▲

HAND-OPERATED PUNCH PRESS
performs variety of operations

Small blanking, forming, perforating, assembling and other operations can be performed on this hand-operated punch press. Distance from center of slide to back is 1¾ in., width of opening in back is 1½ in., stroke of slide is ¾-in., adjustment is 1⅛ in. and maximum die space as shown in picture is 2⅛ in. Die space can be increased to any desired height by blocking up between base and bottom of press. Steel base measures 10 x 6 x 1 in. and ram has ¾-in. hole for punch stem. No. 3 taper pin in handle shaft shears off before damage occurs to other points. Made by **Union Tool Co.**, 299 Norton St., Rochester 21, N. Y.

▲ For more details circle **NED-1953** on enclosed inquiry slip ▲

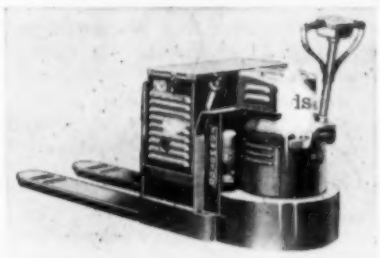
BUILT-TO-ORDER CONVEYORS
use many standard components



Press-Helper series of machine-serving conveyors features units which are built to order for each job, yet make use of many standard Metzgar conveyor parts. Applications include conveying parts to and from machines and carrying waste from machining operations. Model illustrated has 6-ft by 12-in. cleatless belt operating over standard 6-in. drum pulleys and with adjustable tension. Receiving and discharge heights are adjustable from 14 to 60 in. Unit is mounted on portable base. Other standard lengths and widths are available, and belt can be furnished with or without cleats. Made by **Metzgar Co.**, 416 Douglas St. N. W., Grand Rapids 4, Mich.

▲ For more details circle **NED-1954** on enclosed inquiry slip ▲

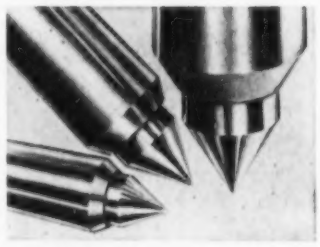
GAS-ELECTRIC PALLET TRUCK
permits around-the-clock operation



Equipped with Ready-Power gasoline engine driven direct current power plant, model W electric pallet truck is designed for handling 4000-lb pallet loads. Power plant is mounted in standard battery compartment and consists of engine, generator, fuel tank, starting battery and necessary accessories. Pushbutton controls are located in steering handle and afford three variations in speeds. Made by **Towmotor Corp.**, 1219 E. 152nd St., Cleveland 10, O.

▲ For more details circle **NED-1955** on enclosed inquiry slip ▲

MACHINE CENTER
withstands heavy wear and high heat



Dead center made of Exmet alloy withstands galling, burning, heavy wear and high speeds experienced in machining operations. Super-Center does not need frequent lubrication and retains its accuracy. Continued use is possible without regrinding. Centers are available in all sizes of Morse, Brown & Sharpe and Jarno tapers, both in conventional styles for lathes and in gashed type for grinding operations or turning where extra clearance is required. Made by **DoALL Co.**, 256 N. Laurel Ave., Des Plaines, Ill.

▲ For more details circle **NED-1956** on enclosed inquiry slip ▲

GRINDING WHEEL
for rough, finish and notch grinding

Reinforced, flexible hub - type grinding wheel known as the BFR performs rough, finish and notch grinding. Designed for use on right angle or sander type portable grinders, wheel is made of carded web material impregnated with abrasive grain. It is light, has unusual strength afforded by safety web built into back side and is sufficiently flexible to allow blending surfaces of contours and smoothing down welds and notch risers in castings. Wheel also does effective polishing jobs. In case of breakage during operation, safety web holds pieces together until machine is stopped. Made by **Norton Co.**, 200 New Bond St., Worcester 6, Mass.

▲ For more details circle **NED-1957** on enclosed inquiry slip ▲

METAL INSPECTION PROCESS
improved dye penetrant is nontoxic

Hidden surface flaws in metal products are readily detected with Dy/Chek dye penetrant inspection process. Improved dye formula is nontoxic and nonhazardous. In use, red dye is applied to precleaned surface which is to be inspected. After being allowed to dwell sufficiently long to penetrate any flaw or defect, no matter how small, dye is removed from surface. White developer is then applied to surface, and any flaw is indicated by red dye showing up through white surface at point of defect. System is suitable for mass production as well as small checking jobs. Full information offered by **Turco Products, Inc.**, Dept. N-1, Terminal Annex 2649, Los Angeles 54, Calif.

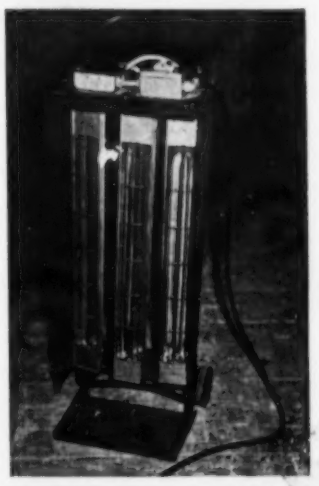
▲ For more details circle **NED-1958** on enclosed inquiry slip ▲

RECESSED DRAWER PULL
for line of shop equipment

Developed for units in line of Hallowell shop equipment, recessed drawer pull presents modern flush front without projections to assure safety and allows easy four - finger grip. Built-in grip costs no more than detachable handle and eliminates assembly operation usually passed along to user. Made by **Standard Pressed Steel Co.**, P. O. Box 581, Jenkintown, Pa.

▲ For more details circle **NED-1959** on enclosed inquiry slip ▲

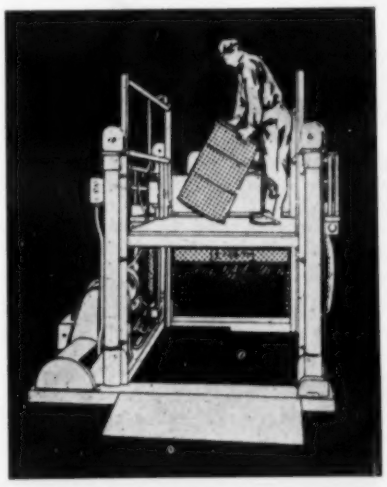
ELECTRIC RADIANT HEATER
warms men in hard-to-heat places



Employees working in such outdoor or indoor hard-to-heat locations as loading platforms, watchmen's houses, large open rooms or poorly insulated buildings can be kept warm with portable Chromalox electric radiant comfort heaters. Units are equipped with 6-in. length of BX cable and plug, and two movable mounting clamps and bolts. Adaptable to many locations, heaters can be bolted alongside machines, mounted on portable rigs or simply laid on floor. Three models are available: one, 24½ in. long at 800 w; a second, 30¾ in. at 1100 w; and the third is 46¾ in. at 1800 w. First two can be had for 115 or 230-v operation, while third is for 230 v only. Protective grills and input controllers for selective heating are optional. Photo shows three 2.4 kw heaters mounted on two-wheel base. Made by **Edwin L. Wiegand Co.**, 7509 Thomas Blvd., Pittsburgh 8, Pa.

▲ For more details circle **NED-1960** on enclosed inquiry slip ▲

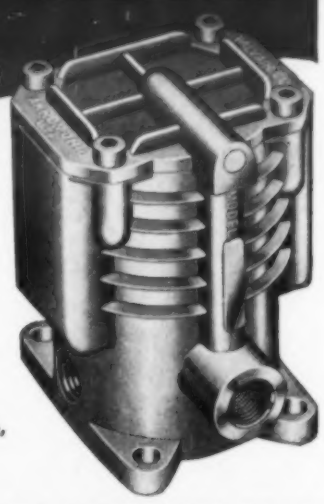
PORTABLE ELEVATING PLATFORM
lifts 3 tons up to 20 ft high



One man can operate this portable loading platform which has a capacity of 1 to 3 tons and height range of up to 20 ft. Entire platform assembly moves easily on retractable casters. Standard platform is 4 x 4 ft square, but other sizes are available to meet requirements. Of welded construction, loading platform can be electrically operated with either floor or platform control, or both. Applied in industry, it has served to minimize strain and exertion in loading jobs. Constructed by **Atlas Industrial Corp.**, 845-ND 39th St., Brooklyn 32, N. Y.

▲ For more details circle **NED-1961** on enclosed inquiry slip ▲

The *New* VALVAIR
SOLENOID PILOT VALVE



All This at a Low Price!

- OVER 20,000,000 CYCLES
- CORROSION-PROOF
- NO OVERHEATING
- MANIFOLD MOUNTING AVAILABLE

SIZE: ¼" pipe tap, orifice ⅛" or 3/16".

Write for our new Bulletin N-3.

The NEW Valvair Solenoid Pilot Valve is offered in 2-way and 3-way models, normally open or normally closed. Coils are completely sealed. Only two moving parts: spring and plunger. Valve life is almost unlimited.

VALVAIR CORPORATION • 947 Beardsley Ave., Akron 11, Ohio
AFFILIATE: SINCLAIR-COLLINS VALVE CO.

Rely Upon Valvair — 2-WAY — 3-WAY — 4-WAY

For more details circle NED-1962 on enclosed inquiry slip

AMERICAN ELECTRIC
Model 275
MOTOR ALTERNATOR

1000 TO 1800 WATTS
400 CYCLE POWER SUPPLY
IN LESS THAN A 2 FOOT PACKAGE!

Small, light, compact, equally satisfactory on permanent or portable installations. Low speed—quiet operation. Meets power supply requirements for AN-E-19 equipment. Multiple units efficiently replace one single, large-capacity alternator . . . Save space, cost far less, protect against breakdowns!

NEW PRINCIPLE uses no moving coils, brushes, springs etc.... *It's as completely wear-free as its ball-bearings!*

Capacities up to 1000 Watts single phase or up to 1800 Watts three phase. Single or 3 phase common-shaft motor drive. Larger capacities available.
WRITE FOR DETAILS!

AMERICAN ELECTRIC MOTORS
TRADE MARK
4911 Telegraph Road, Los Angeles 22, California

For more details circle NED-1963 on enclosed inquiry slip

Hundreds of "on the job" tests prove that
PAINTING JOBS go FASTER — are SAFER — COSTS LESS
with the ARSCO

INDUSTRIAL PAINT ROLLER
FOR HEAVY DUTY

HERE'S WHY: Engineered for heavy duty, ARSCO ROLLERS *hold more paint,* by actual test, than any other roller or brush. *SAVE TIME* by covering more surface faster. *SAFER* because they cut down need for ladders and scaffolds with their inherent dangers.

AVAILABLE IN 3 SIZES: 9", 14", 18".

Made with *High Pile Lambswool.* Works with ALL PAINTS. Rustproof aluminum frame; brass bearings; patented "Flip Lock." Equipped with long 4 ft. handle (longer pole easily attached).

MAIL NOW

THE AMERICAN PROD. CO., 3306 Edson Ave., New York 69
Please send me illustrated literature, price list, and discounts.
Name _____
Company _____
Street _____
City _____ Zone _____ State _____

For more details circle NED-1964 on enclosed inquiry slip

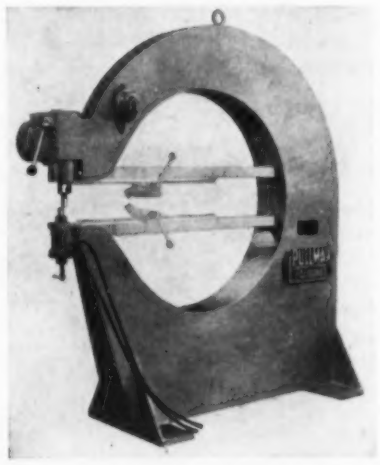
Attend the ASTE Industrial Exposition

Hundreds of products announced to the industrial public through the columns of New Equipment Digest will be shown publicly for the first time at the ASTE Industrial Exposition which will be staged in the Chicago International Amphitheatre during the week of March 17 to 21, 1952. In this issue you will find a large number of descriptions of new machines, tools, instruments and processes that will be displayed in Chicago. The exposition is more than a "Tool Show," as it was known several years ago. It covers the entire field of industrial production. With today's emphasis on supplying both "guns and butter," this exposition demands the attention of every executive concerned with tooling, inspection, quality control, machine tools, materials handling, new materials and processes, and other phases of production.

Hundreds of manufacturers will exhibit their products. A balanced technical program will review methods to obtain maximum output per man and per machine. It will also deal with things yet to come. There will be ample opportunity to talk over mutual technical problems as well as exchange ideas and experiences in "Tooling for Defense." We heartily recommend that you arrange to attend the ASTE Industrial Exposition.

A. N. Gregg
EDITOR

STAMPING TRIMMER for deep drawn and bulky work



Cutting of excess metal from deep drawn and bulky stampings can be performed by Pullmax Trimmer which features totally enclosed mechanism operating in oil. For insertion of bulky work, lower tool holder is raised and lowered by pneumatic pressure. Machine does straight, circle and irregular cutting that can be performed on other Pullmax machines. Bars that hold circle and straight cutting attachments are removable. Frame is circular in shape to provide clearance. Machine trims mild steel up to 5/32-in. at speed from 4 to 16 fpm. It has throat depth clearance of 48 in. and is powered by 1 hp motor. Available from **American Pullmax Co.,** 2457 N. Sheffield Ave., Chicago 14, Ill.

For more details circle NED-1965 on enclosed inquiry slip

SAFE and SATISFACTORY

Washroom Temperatures

The Aerco Heat Exchanger Control is a packaged unit which provides temperature control within two degrees regardless of the rate of flow or the intermittent nature of the service. It predicts conditions by drawing samples from three different parts of the shell, then mixes the samples and actuates the thermostat.

It governs and acts instantly when any water is taken off. Even when oversized, the Aerco shuts off before there can be any over-ride. It is used as a controlled heater for capacities from 5 to 300 g.p.m. and as a booster-control in series with storage tanks.

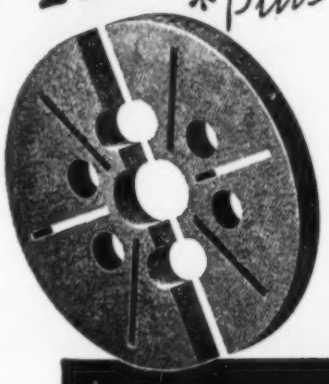
FOR DISH WASHERS. Here at last is a method which acts instantly and insures temperatures without over-ride. Ask for Technical Bulletin No. 22.

AERCO HEAT EXCHANGER CONTROL

AERCO CORPORATION
214 Lafayette Place
Englewood, New Jersey
1C

For more details circle NED-1966 on enclosed inquiry slip

P.V.* APPROVAL
*Plus Value



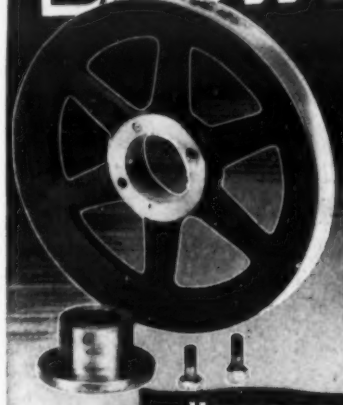
Western Felt users over a long period of years have placed the stamp of approval on a long list of its products. They know from experience the "plus value" in every Western Felt component part. Highest precision in its processing and cutting produces a uniformity that minimizes rejections—prevents failure of the finished product from felt causes. They are available from wool softness to rock hardness—never lose shape—do not ravel or fray—resist oil, water, age—are resilient, flexible, compressible—may be cut to close tolerances.

WESTERN Felt WORKS
4035-4117 Ogden Ave., Chicago 23, Illinois
Branch Offices in Principal Cities
Manufacturers and Cutters of Wool Felts

Acadia Synthetic Products Division, WESTERN FELT WORKS, Processors of Synthetic Rubber — Sheets, Extrusions, Molded Parts.

For more details circle NED-1967 on enclosed inquiry slip

BROWNING



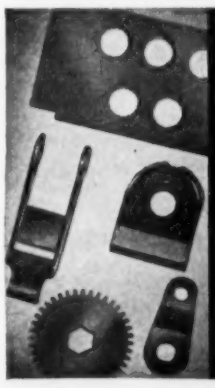
First Again!

BROWNING SHEAVES
with "UNBREAKABLE" MALLEABLE IRON
SPLIT TAPER BUSHINGS

WRITE FOR THE NAME OF THE BROWNING DISTRIBUTOR NEAR YOU

BROWNING MANUFACTURING COMPANY
MAYSVILLE, KENTUCKY, U. S. A.

For more details circle NED-1968 on enclosed inquiry slip



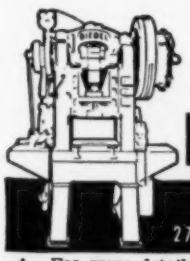
Why trust a costly die to an obsolete press?

If this is your problem—isn't it important to be assured of top-flight press and die performance behind every stamping job you plan?

INCREASED PROFITS!

Correct press and die engineering will increase your stamping output, reduce your down time, and give your die longer life. Let DIEBEL engineers with 30 years of specialized experience help you make every automatic press outlay more profitable.

For a guide to important savings, write on your letterhead for a new booklet, "Cost Savings thru Precision Stamping"



5-8-12 Ton Di-Masters
40 Ton Di-Matic

DIEBEL HI-PRODUCTION AUTOMATIC PRESSES
Di Machine Corp.
2701 W. IRVING PARK ROAD • CHICAGO 18, ILL.

For more details circle NED-1969 on enclosed inquiry slip

insist on "buried" integrity in your products

In the durable goods field most of the products are composed of many component parts. Acadia Synthetic Rubbers are contributing importantly to the superiority of thousands upon thousands of these products on land, sea, and in the air—from battleships to tiny instruments. For years manufacturers in hundreds of industries have found by experience that, with Acadia Synthetic Rubber parts in their products, they will never have trouble from that source. Acadia is a "buried" but vital component for products of highest integrity. Insist upon it!

for every synthetic rubber requirement

sheets • tubing • strips • channel • washers
seals • bellows • gaskets • rings
extrusions • cut parts

Resists oil, age, wear, heat, light

ACADIA Synthetic PRODUCTS
Processors of Synthetic Rubber and Plastics • Sheets • Extrusions Molded Parts

DIVISION WESTERN FELT WORKS
4035-4117 Ogden Avenue, Chicago 23, Illinois

For more details circle NED-1970 on enclosed inquiry slip

INSTRUMENT LATHE
available with various attachments

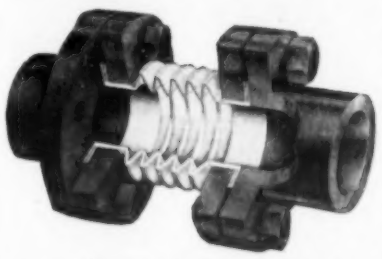
This back-geared, screw cutting instrument lathe has 8½-in. swing and will turn or bore accurately within 0.00001-in. in 6 in. with work being held in collet or between centers. Engine type model 608 lathe has bronze bearing spindle and large slide areas. Attachments are available for milling, spiral cutting, slotting, relieving, taper turning, radius turning, grinding and forming.

Other features include three-point bed mounting, double bevel alignment for head and tailstock, carriage bearing of 76 sq in. on bedways and separate lead screw for thread cutting. Made by **Rivett Lathe & Grinder, Inc.**, Dept. NEP-2, Brighton 35, Boston, Mass.

For more details circle NED-1972 on enclosed inquiry slip

BELLOWS PIPE CONNECTOR
made of chemically inert material

Applications of John Crane bellows type connector are where vibration, expansion and electrolysis exists in handling of corrosive liquids or gases and solvents. It is electrically nonconductive, flexible at −94° F and as strong at 480° F as at 70° F. Fabricated of chemically inert Teflon, connector serves as vibration dampener and expansion joint, as well as connecting misaligned couplings and insulating flanges electrically. End flanges of joint are French type envelope gaskets made integral with joint for easy assembly and leakproof seal. Made by **Crane Packing Co.**, Dept. F-25, 1800 Cuyler Ave., Chicago 13, Ill.



For more details circle NED-1973 on enclosed inquiry slip

AIR CIRCULATOR
unit also serves as window fan

Adaptable for use with casement windows because it requires no installation, this 16-in. portable air circulator can also be used as window fan. It is adjustable in height from 28 to 48 in., floor to center of blades. Vertical tilt adjustment permits directing air flow from straight up to straight down. Fan is equipped with quiet type overlapping blades and two-speed capacitor motor. Delivery is 3750 cfm at high speed. Two wheels facilitate handling of fan. Made by **Emerson Electric Mfg. Co.**, 8108 Florissant Ave., St. Louis 21, Mo.

For more details circle NED-1974 on enclosed inquiry slip

IDEAL Thermo-Grip® Does Soldering Jobs Better!

Thermo-Grip with "Plier" attachment speeds up soldering lugs to cables.

FASTER!
Resistance heating provides instant heat for fast production soldering.

EASIER!
One hand always free to handle solder. Concentrates heat. Does jobs no other tool can handle.

CHEAPER!
Time savings up to 30%—no waste — no cold flow joints—no re-makes.

NEW LOW-COST MODEL

Sold Through America's Leading Distributors

"Standard" 1000-Watt Model with "Plier", "Pencil" and "Fork" attachments also available.

TEST IT FREE!
IDEAL INDUSTRIES, Inc.
1032 Park Avenue
Sycamore, Illinois
Please arrange FREE Thermo-Grip Demonstration and send catalog data.
NAME
COMPANY
ADDRESS
CITY ZONE STATE

For more details circle NED-1976 on enclosed inquiry slip

CUT LOADING TIME! 1 DOCK HANDLES THE FREIGHT OF 3

ROWE ADJUST-A-DOCKS
Eliminate Costly Hand Loading

1. Brings dock to level of any truck bed.
2. Speeds loading by fork and lift truck directly into carriers.
3. Eliminates dock hazards.
4. Floats at truck level.
5. Sturdy hydraulic finger-tip control.
6. Pays for itself in 30 days.

ADJUST-A-DOCK

LOOK into the SAVINGS you can make in freight handling with Rowe Adjust-A-Docks. *WRITE FOR BULLETIN* and complete information.

ROWE METHODS, INC.
2534-I DETROIT AVENUE • CLEVELAND 13, OHIO

For more details circle NED-1977 on enclosed inquiry slip

If you package in cartons...

you can cut costs with *approved* super-strong

TAPE-STRAP*
brand filament tape

Switch to faster, safer, lower cost packaging with Tape-Strap. Users report savings up to 85% over previous packaging methods.

Tape-Strap is tremendously strong . . . so strong that strips only 10 inches long are approved for most applications. It's laminated, with a middle layer of resilient, shock-absorbing material that's imbedded with thousands of tiny filaments, 5,000 to the inch of width. Outside layers are tough, flexible kraft.

Permanent reinforcement. A deep layer of the finest, water-soluble gumming grabs hold the instant it touches the container, making Tape-Strap an integral part of the carton. Tape-Strap can't be slipped off and replaced.

You don't need special machinery to apply Tape-Strap. It's put on without pressure, has no cutting edge, can't injure merchandise or personnel. There's no disposal problem, either.

FREE SAMPLE ROLL
Many other Tape-Strap applications have been granted special approval. Write for free sample roll, and data folder.

APPROVED
Gray strips in diagrams indicate Tape-Strap. Applications shown are approved by The Official, Southern and Western Classification Committees, (Rule 41, Sec. 8 (b), Supp. 29, C.F.C. No. 19) . . . and approved by Railway Express Agency, Inc., (Supp. No. 36, to Official Express Classification No. 34)
*Trade Mark

LEADERS IN THEIR LINE

MID-STATES Gummed Paper Company
2515 S. Damen Ave., Chicago 8, Ill.

BRANCH OFFICES: New York, Philadelphia, Cleveland, Detroit, St. Louis, Los Angeles

For more details circle NED-1971 on enclosed inquiry slip

FOR EASY SHIFTING OF HEAVY EQUIPMENT

DUFF-NORTON
Traversing Bases

Heavy machinery and equipment can be shifted with ease by means of Duff-Norton Traversing Bases. Used with or without screw and ratchet type jacks, loads can be moved horizontally up to 26". You should have a set of these bases in your plant. Investigate the savings they make possible.

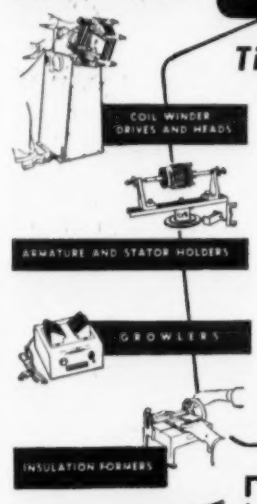
HOLDS AND MOVES LOADS UP TO 100 TONS
IN EITHER DIRECTION

Write today for Bulletin AD-4H.

THE DUFF-NORTON MANUFACTURING CO.
Main Plant and General Offices: PITTSBURGH 30, PA.—Canadian Plant: TORONTO 6, ONT.
"The House that Jacks Built"

For more details circle NED-1975 on enclosed inquiry slip

CROWN MOTOR REPAIR SHOP EQUIPMENT



Time-Savers to Cut Costs On Motor Repair Jobs

Shorten the time it takes to put a motor through the repair shop and you reduce costs or increase your profits. CROWN Motor Repair Shop Equipment is designed by practical electrical men to increase shop volume and quality without increasing payroll. Every item in the CROWN Line has proved in shop practice to pay for itself many times over. Economical in first cost.

GET THIS FREE CATALOG TODAY!

Mail the Coupon

CROWN INDUSTRIAL PRODUCTS CO.
406 Borden Ave., Sycamore, Illinois
Please send me your new catalog of motor repair shop equipment.
NAME
COMPANY
ADDRESS
CITY ZONE STATE

For more details circle NED-1978 on enclosed inquiry slip

STEEL

Every Kind

Some steel products are in short supply but over-all stocks are still large, diversified

NEARBY STOCKS INCLUDE:

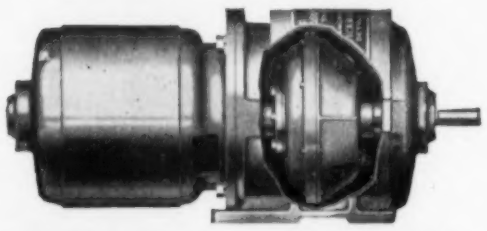
BARS—carbon & alloy, hot rolled & cold finished
STRUCTURALS—channels, angles, beams, etc.
PLATES—U, M. & sheared, Inland 4-Way Floor Plate
SHEETS—hot & cold rolled, many types & coatings
TUBING—seamless & welded, mechanical & boiler tubes
STAINLESS—Allegheny sheets, plates, bars, tubing, etc.
REINFORCING bars & access.
BABBITT bearing metal
MACHINERY & TOOLS for metal fabrication

RYERSON

Joseph T. Ryerson & Son, Inc. Plants: New York, Boston, Philadelphia, Detroit, Cincinnati, Cleveland, Pittsburgh, Buffalo, Chicago, Milwaukee, St. Louis, Los Angeles, San Francisco Spokane, Seattle

For more details circle NED-1979 on enclosed inquiry slip

American Blower TM Type GÝROL FLUID DRIVES



MECHANICAL ADVANTAGES:

- Provides smooth flow of power. Shocks are absorbed in a cushion of oil. There's no metal-to-metal contact between driving and driven machinery.
- Offers by its inherent shearpin action, selective overload protection for both motor and driven machinery. Decreases machine "down" time.
- Available as a complete packaged unit suitable for either direct or belt connection to the driven machine. Minimizes alignment problems.

Free trial units are available to original equipment manufacturers.

AMERICAN BLOWER

American Blower Corporation, Detroit 32, Michigan
Division of American Radiator & Standard Sanitary Corporation

Serving home and industry: AMERICAN STANDARD • AMERICAN BLOWER • ACME CABINETS CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILERS • ROSS HEATER • TONAWANDA IRON

For more details circle NED-1980 on enclosed inquiry slip

EFFICIENT *Electric* HEAT GIVES YOU $$$ SAVINGS

CHROMALOX *Electric* HEATERS

SAVE MONEY, TIME AND LABOR WITH THESE EFFICIENT AND PROVED HEATING UNITS

If you use heat in your production line, processes or products, Chromalox Electric Heaters can most likely point the way to added savings through increased efficiency, lowered costs, decreased working time. See for yourself how Chromalox Heaters can go to work so easily in your plant.

GET THIS BOOKLET—IT TELLS YOU HOW

EDWIN L. WIEGAND CO., Industrial Division
7509 THOMAS BLVD., PITTSBURGH 8, PA.
Send me the illustrated booklet "100 Ways To Apply Electric Heat."

Name _____
Company _____
Street _____
City _____ Zone _____
State _____
I use heat for _____
IB-12

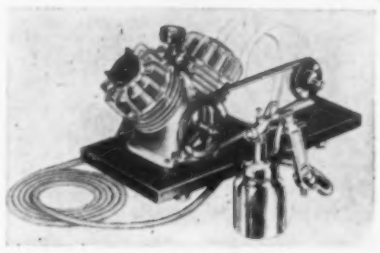
CHROMALOX

See other advertisement on page 63

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-1981 on enclosed inquiry slip

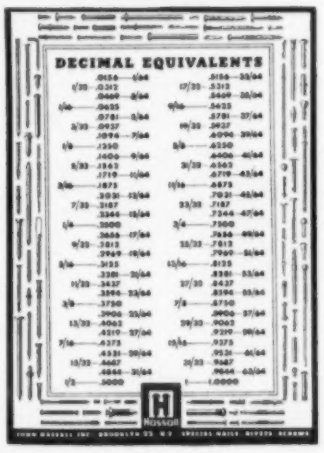
PORTABLE PAINT SPRAYER
delivers 4 cfm at 40 psi



House and barn paints, lacquers, enamels, varnishes, cold water paints and calcimine are easily handled by No. 444 Master Twin sprayer which can be powered by any ½-hp electric motor or gas engine. Unit delivers 4 cu ft of oil-free air per minute at 40 psi. Complete outfit (as illustrated) includes No. 121 internal mix, all-purpose gun; 15 ft of ¼-in. ID high-test rubber air hose; V-belt and motor pulley. Gun operates on 20 to 45 psi air pressure at 1½ to 2½ cfm, and has adjustable spray pattern up to full flat fan spray 12 in. wide or full round spray. Made by **W. R. Brown Corp.,** 2673 Normandy Ave., Chicago 35, Ill.

For more details circle NED-1982 on enclosed inquiry slip

DECIMAL EQUIVALENT CHART
accurate to four decimal places



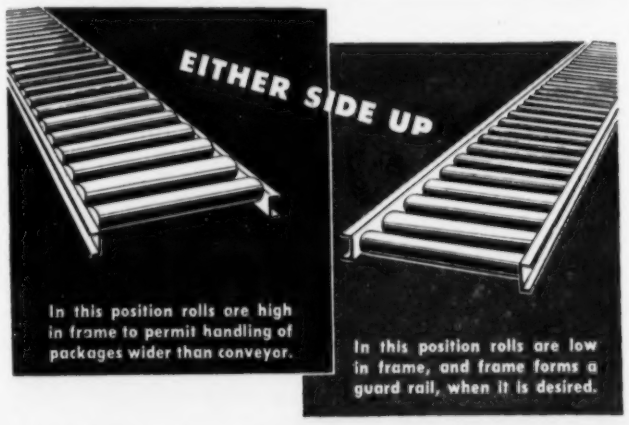
Engineers and officials of engineering and industrial training schools will find this decimal equivalent wall chart, which is accurate to four decimal places, a handy tool. It is printed in three colors, not only for attractive design, but to signal decimal equivalents of fractions. Chart measures 17 x 24 in. and is framed by cut-out illustrations of 88 types of special cold-headed products manufactured by company. Send requests for free chart to **John Hassall Inc.,** 398 Oakland St., Brooklyn 22, N. Y.

For more details circle NED-1983 on enclosed inquiry slip

HIGH-SPEED HYDRAULIC PRESS
for top or bottom transfer molding

Deep draw work is included in wide range of applications of model 727 high-speed hydraulic press available with either top or bottom plunger to suit transfer molding requirements. Press has extra-long transfer stroke for complete withdrawal of plunger from loading area to give ample clearance for loading preforms. Each cylinder has its own pump and controls for separate pressure and speed adjustment. Bar-type controller provides automatic cycle control of molding through simple movement of buttons on graduated bars. It can be reset while press is in operation. Ram closes at three controlled speeds with final closing only as fast as material plasticizes. Optionals include hot plates for steam or electric heating, equipment for steam heating and water cooling of molds and adjustable head with or without longer tie-rods. Made by **F. J. Stokes Machine Co.,** 5900 Tabor Rd., Philadelphia 20, Pa.

For more details circle NED-1984 on enclosed inquiry slip



A PRACTICAL FEATURE OF *Logan*
STOCK ROLLER CONVEYOR

Above is shown one of the practical features of Logan Stock Roller Conveyor. Other features include (a) immediate shipment (b) available in several sizes (c) both straight and curved section can be furnished (d) both stationary and portable supports available. Write for literature.

Write or phone your requirements

Logan Conveyors

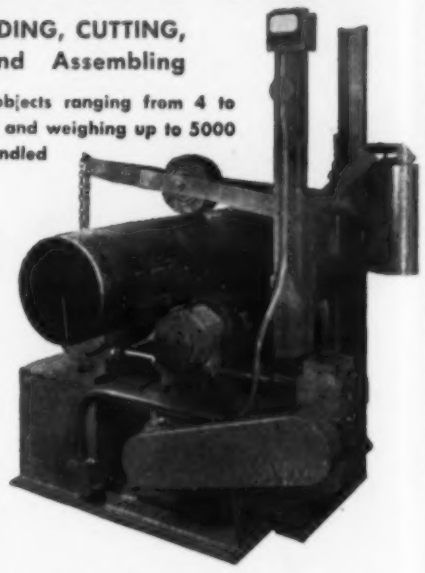
LOGAN CO., 215 CABEL ST., LOUISVILLE, KY.

For more details circle NED-1985 on enclosed inquiry slip

PIPE *and* CYLINDER ROTATOR

SPEEDS WELDING, CUTTING, Grinding and Assembling

Pipe and cylindrical objects ranging from 4 to 30 inches in diameter and weighing up to 5000 pounds can be handled with ease.



- Rubber-tired rollers are driven by an electric motor through an adjustable speed drive to give any desired surface speed to rotated workpiece.
- Tachometer, calibrated in inches-per-minute, indicates peripheral speed of work accurately.
- Outrigger to accommodate any reasonable length cylinder or pipe can be supplied for machine.

Write for Bulletin No. PR-1

CECIL C. PECK CO.

4614 Prospect Ave. Cleveland 3, Ohio

For more details circle NED-1986 on enclosed inquiry slip

The AIRMOVER

For Low Cost *Natural* Ventilation it's good business to use these Swartwout Ventilators

Beat the cost of power and expensive duct work when *Natural* (gravity) ventilation will do the job. In thousands of industrial and commercial buildings Swartwout AIRMOVER and Swartwout-Dexter HEAT VALVE move enormous quantities of heat, smoke and fumes at *no after-installation cost* except small maintenance. And original cost is economical per square foot of opening. . . . It pays you to get Swartwout help on your ventilating problems. Write for Bulletin 344C.

The HEAT VALVE

18511 Euclid Avenue, Cleveland 12, Ohio

The Swartwout Co.

Roof Ventilators and Ventilating Louvers

POWER PLANT EQUIPMENT • PROCESS INDUSTRY CONTROLS

For more details circle NED-1987 on enclosed inquiry slip

NEW ADJUSTABLE DRILL JIG
eliminates layout; cuts drilling time

Used for drilling holes through round stock and hex stock from ¼" to 2" and cap screws from ¼" to 1¼", the new Mathewson Adjustable Drill Jig eliminates layout and can cut drilling time on small lots to a fraction. And it eliminates the costs of special jigs for larger quantities. Holes for cotter pins, set screws, drive pins for bayonet joints, oil holes in tubular sections, and wiring holes in cap screws, are all typical of the operation that can be done more economically with this jig. Hole diameters range from .052" to .531", using your A.S.A. standard slip bushings. The hardened V-block has two 60-degree V's for centering round or hexagonal stock, one for ¼" to 21/32" diameter, one for 21/32" to 2" diameter. Adjustable stop for locating work longitudinally for drilling any distance from end, may be used on either side. Adjustable bushing carriers hold slip bushings and clamp work securely. Jig highly successful in permitting use of inexperienced drill operators. For circular write to: **Mathewson Machine Works,** 22 Hancock St., Quincy, Mass. *Advt.*

▲ For more details circle **NED-1988** on enclosed inquiry slip ▲

YOU DON'T HAVE TO
KICK THE BUCKET
TO CLEAR IT—IF IT'S AN
M-T-MATIC

Irresistible leverage sweeps out SAND—COAL—GRAVEL, or any granular materials, on every trip—*even if frozen or close-packed.* The secret is the separately mounted stripper-plate—which must push up and out when it starts over pulley radius. THOUSANDS NOW IN USE—handling *more* material at same or faster belt speeds. Saves belts—cuts maintenance—easy to install on any elevator conveyor—all sizes.

Standard buckets also available . .

★ **Send for prices today (give present bucket size)**

QUICK DELIVERY!

PEKAY MACHINE & ENGINEERING CO.

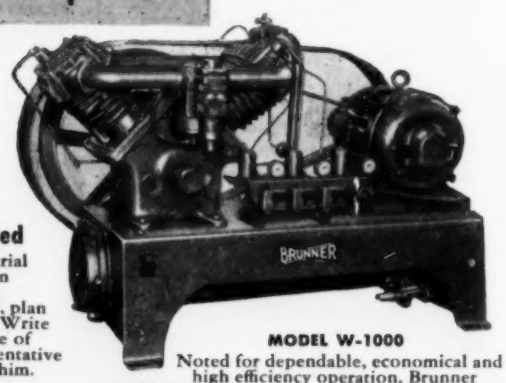
100 N. LA SALLE STREET CHICAGO 2, ILLINOIS

▲ For more details circle **NED-1989** on enclosed inquiry slip ▲

BRUNNER SINCE 1906

REFRIGERATION
answers many production problems

Industry is using refrigeration in many new and unusual ways to step up volume, control quality, reduce unit costs, improve working conditions. Brunner's experience in helping manufacturers and processors make better use of refrigeration and air conditioning is yours for the asking.



Brunner is represented in all industrial areas by men qualified to recommend, plan and install. Write for the name of your representative and talk to him.

Would you like a copy of the new Brunner Catalog?

MODEL W-1000

Noted for dependable, economical and high efficiency operation, Brunner Refrigeration Units are available in a full range of capacities from ¼ hp. to 75 hp. . . . 69 air and water cooled models offering many exclusive application advantages.

BRUNNER MANUFACTURING CO., UTICA 1, N. Y., U. S. A.

BRUNNER SINCE 1906

AIR CONDITIONERS—Self Contained Four Sizes . . . 3, 5, 7½ and 10 hp.
For remote installations—Brunner Condensing Units to 75 hp.

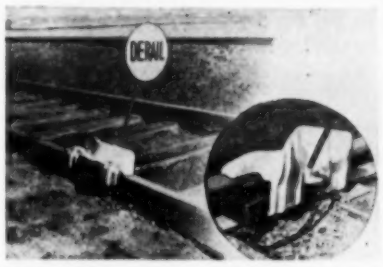
▲ For more details circle **NED-1990** on enclosed inquiry slip ▲

CLEANSING TISSUE DISPENSER
vends pocket size packages

Developed for installation in washrooms or placement near other vending machines, this coin-operated machine dispenses pocket and purse size packages of paper cleansing tissue. Vender measures 6½ x 12½ x 30 in. and can be mounted on wall or on stand which provides storage space for 1 gross of tissue packages. Machine holds 72 packages when filled and can have name and picture of tissue brand painted on front. Made by **Vend-Rite Mfg. Co.,** Dept. K, 1534 N. Halsted St., Chicago 22, Ill.

▲ For more details circle **NED-1991** on enclosed inquiry slip ▲

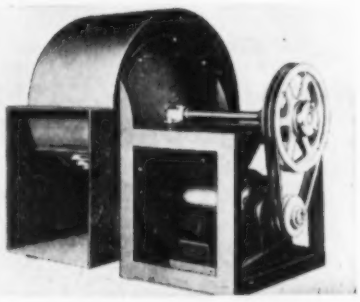
PORTABLE DERAILING UNIT
wedge construction locks unit



Available for temporary derailing service and safety, Nolan derail unit is applicable wherever workers may be endangered by wild cars, switching cars, or uncontrolled and unsuspected car movements in rail yards or spurs. Unit is particularly adapted to mine use as protection at room necks and entries. Derailment is accomplished in either direction, on right or left hand rail. No spiking is necessary as wedge construction securely locks derails to rail. Each unit is complete with flag. Made by **Nolan Co.,** 262 Pennsylvania St., Bowerston, O.

▲ For more details circle **NED-1992** on enclosed inquiry slip ▲

BELT DRIVEN BLOWERS
have ratings up to 7½ hp



Small units for use in electronic cooling and larger units for general drying, exhaust, ventilation and air-driven conveyor systems are included in line of belt driven utility blowers. Sizes range from 9 to 30-in. diameter wheels, with horsepower ratings from 1/6 to 7½ hp. Features include adjustable pulley speeds, vibration dampeners, weatherproof covers and interchangeable motors produced by same manufacturer. Blowers can be supplied with acid resistant finishes. Made by **Peerless Electric Co.,** Fan & Blower Div., 1401 W. Market St., Warren, O.

▲ For more details circle **NED-1993** on enclosed inquiry slip ▲

Less TOOL HANDLING...

- **MORE PRODUCTION**
- **MORE PROFIT**

with *Mall* Flexible Shaft Machines

Grinding
Wire Brushing
Sanding
Polishing

Here's speedy, *lightweight* power for weld grinding and finishing work, wire brushing, disc sanding, polishing and many other useful applications. Save operator's time and energy with a MALL Flexible Shaft Machine. Ruggedly built—equipped with heavier-duty, constant speed motor with the power reserve to handle overloads. Shaft and housing made from finest special steels — entire machine quality-built.

Mail Coupon For Bulletin No. 430.

Mall

40 Factory-Owned Service Warehouses, Coast To Coast, To Serve Our Customers and Thousands of Dealers.

MALL TOOL COMPANY 7727 S. Chicago Ave. Chicago 19, Illinois
Send Bulletin 430, Mall Flexible Shaft Machines.

Name.....
Street & No.....
City.....Zone.....State.....

A 7025-1/9

▲ For more details circle **NED-1994** on enclosed inquiry slip ▲

The Answer to INDUSTRIAL DERMATITIS
is just as simple as this . . . .

. . . In some of the even larger plants, they have found that by using only two types of Skin-Cote, they get complete protection and have reduced dermatitis to one of their minor hazards . . . to a problem of simply seeing that their employees use it. To encourage the use of Skin-Cote, more and more companies are supplying it in individual jars rather than issuing it from *bulk containers in the tool crib . . . Send for eight page catalog and complete information—you will find that the answer to Industrial Dermatitis can be just as simple as this.

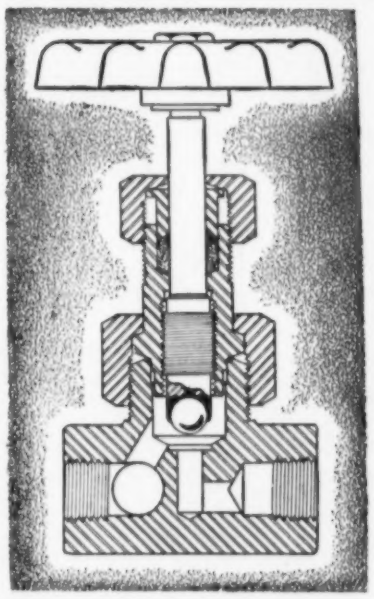
*Available in individual jars or bulk containers.

The BOYER-CAMPBELL Company

6538 St. Antoine *Safety Division* Detroit 2, Mich.

▲ For more details circle **NED-1995** on enclosed inquiry slip ▲

NEW!
BALL VALVE
for liquids, gas or steam



Here's a radically-new forged steel valve for general heavy industrial use. Can't leak . . . practically never wears out . . . costs little or no more than ordinary valves!

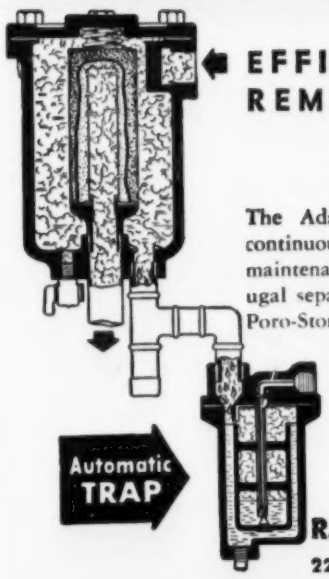
In place of a disc or plug, the new Foxboro Ball Valve has a retained, free-rolling stainless steel ball that exposes new surface to seat at every closing.

Foxboro Ball Valves handle pressures to 3000 psi. Available in straight-thru and angle types. Two or four connections to simplify piping. ¼" size. Write for detailed folder. **The Foxboro Company, 1343 Neponset Avenue, Foxboro, Mass., U. S. A.**

FOXBORO INSTRUMENTATION
REG. U. S. PAT. OFF.

▲ For more details circle **NED-1996** on enclosed inquiry slip ▲

Poro-Stone Filtration
FOR COMPRESSED AIR



EFFICIENTLY REMOVES:

OIL, WATER PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 176.

R. P. ADAMS CO., INC.
227 E. Park Dr., Buffalo 17, N. Y.

ADAMS *Poro-Stone* AIR FILTER

▲ For more details circle **NED-1997** on enclosed inquiry slip ▲

Have you heard about

THE LUBRICANT OF MANY USES

Moly-sulfide

A LITTLE DOES A LOT

In the shop—In the field

Moly-sulfide is a newly-introduced solid-film lubricant, highly successful in applications involving extreme pressures, high velocity, fretting, elevated temperatures and other difficult frictional conditions. We have compiled detailed records of 154 different applications of molybdenum sulfide to actual shop and field problems—some of which might be similar to your own.

Shopmen, engineers, lubrication specialists—write now for a copy of this new 40-page booklet.

SEND FOR THIS FREE BOOKLET TODAY

Climax Molybdenum Company
500 Fifth Avenue · New York City

MS4

For more details circle **NED-1998** on enclosed inquiry slip

Drive out

FOUL AIR

Blow in

FRESH AIR

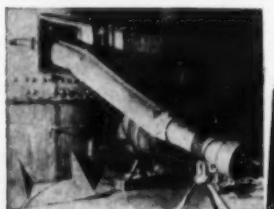
with Coppus Type A Ventilator

Assure greater safety, comfort for workers . . . get greater efficiency.

Drive out dangerous fumes, gases, stagnant or hot air from boilers, cable manholes, tanks, vats and other confined places. *Supply fresh air continuously.*

Send now for further information. Coppus Engineering Corporation, 403 Park Avenue, Worcester 2, Mass.

MANHOLES made safe for workers' entrance within minutes.



BOILER AND TANK INTERIORS cooled by Coppus. Fresh air supplied continuously.

ANOTHER **COPPUS** "BLUE RIBBON" PRODUCT

For more details circle **NED-1999** on enclosed inquiry slip

JUST OFF THE PRESS

Completely NEW!

700 Pages—

450 Illustrations

Sections on: • Easy methods of computing press jobs • How to select the proper type of press • Useful engineering tables • Die illustrations • Glossary of terms used in the pressed metal industry.

Plus a complete service section covering all types of Bliss presses old and new. $7.50.

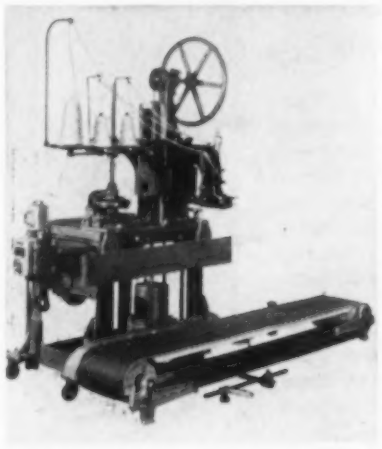
E. W. BLISS CO.
Handbook Department
1356 Raff Road, S.W., Canton, Ohio

Rush me a copy of the Bliss Power Press Handbook.

I am enclosing $7.50 • Bill me $ .....

For more details circle **NED-2000** on enclosed inquiry slip

BAG CLOSING MACHINES
make sewed or tape bound closures



Designed for closing medium to large textile or paper bags, two bag closing machines make plain sewed or tape-bound closures and have capacity in excess of 2800 one-hundred pound bags per 8 hours. Style 21800 P machines (illustrated) is designed to use 80600 or 14500 head and has a 6-ft conveyor. Style 21800 R is similar machine for use with Vibrox packer. Made by **Union Special Machine Co.**, 416 N. Franklin St., Chicago 10, Ill.

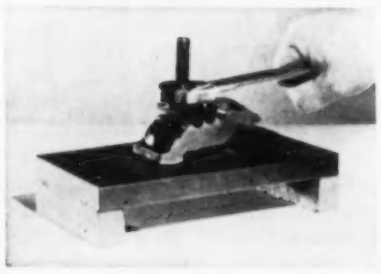
For more details circle **NED-2001** on enclosed inquiry slip

LIGHTING EFFICIENCY FOLDER
presents plans to reduce maintenance

Available without cost to industrial operating personnel, maintenance men and purchasing agents is this file folder entitled "War on Waste by Engineered Maintenance." Folder consists of a "Planned Cleaning Program" and two "Group Replacement Plans" for fluorescent and incandescent lamps that can improve lighting efficiency and reduce maintenance costs. The first program equips maintenance men with engineered scale for determining light cleaning cycles. Replacement plans are based on principle that lamp replacement costs often exceed value of lamp, and that replacing them in groups can save as much as 60 per cent on maintenance alone. Folder offered by **Champion Lamp Works,** Commercial Engineering Dept., Dept. UU, Lynn, Mass.

For more details circle **NED-2002** on enclosed inquiry slip

WORK-HOLDING CLAMPS
designed for machine tool use



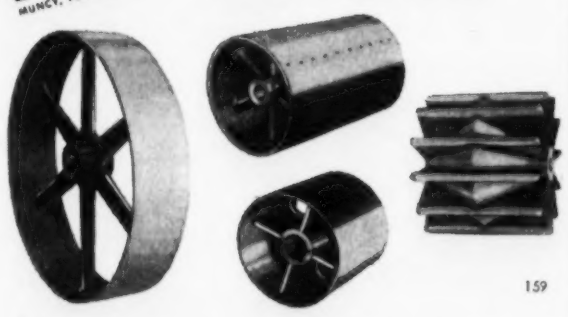
Autoset self-setting clamps for holding work or tools on presses and machine tools are available in sizes ranging from 3 in. long with 1⅛-in. capacity to 8 in. long with 3¾-in. capacity. Tool or work cannot slip, once bolt is tightened. Clamp is malleable iron, and contact and working faces are machined and polished. Made by **Alpha Tool & Supply Co.,** Dept. NED-A, P. O. Box 119, Westwood, N. J.

For more details circle **NED-2003** on enclosed inquiry slip

SPROUT WALDRON MUNCY, PENNSYLVANIA

PULLEYS

SOLID FACE and BELT SAVER



159

In handling rough, abrasive materials, S/W exclusive Belt Saver Pulleys are lengthening belt life as much as 400%. Equally well recognized is the S/W Blue Face Pulley Line in standard and made-to-order types and sizes. Write today for literature. Sprout-Waldron & Co., Inc., 8 Logan Street, Muncy, Penna.

Vertical Mixers, Attrition Mills, Rotary Feeders, Ribbon Type Mixers, Crushers, Knife Cutters, Continuous Mixers, Roller Mills, Separators, Pulleys

SPROUT-WALDRON

For more details circle **NED-2004** on enclosed inquiry slip

engineering research keeps NATIONAL FIRST in laminated plastics

Stiegler's Fungus House

Frederick L. Stiegler, National research engineer, directed the pioneering work that came up with a fungus-resistant vulcanized fibre, satisfactory for extended exposure to moist, warm air.

National Laminated Plastics
nationally known—nationally accepted

NATIONAL VULCANIZED FIBRE — A tough, horn-like material with high dielectric strength. Excellent machinability. Sheets, Rods, Tubes, Special Shapes.

PHENOLITE Laminated PLASTIC — Good electrical insulating material with great mechanical strength; moisture resistant. Sheets, Rods, Tubes, Special Shapes.

Just published! National Laminated Plastics Handbook. Write for copy. Your company letterhead—please.

NATIONAL VULCANIZED FIBRE CO.

Wilmington, Delaware — Offices in Principal Cities — Since 1873

For more details circle **NED-2005** on enclosed inquiry slip

Volume-manufactured in two styles—the socket type and the Crowfoot type, TAC Open End Ratchet Wrenches are scoring phenomenal time and labor savings throughout all Industry.

It is a matter of record that heretofore no tool was made that could — *in a limit of 7° ratcheting arc* — successfully tighten or back off nuts or fittings on tubing or other standing center assemblies. The speed with which TAC can complete difficult wrenching jobs, in anybody's hands, is amazing.

Our plants are currently producing at capacity for all the Armed Forces and for Defense industries.

For Phenomenal Speed in These Wrenching Jobs

ELECTRICAL CONDUIT
HYDRAULIC LINES
LUBRICATION LINES
ENGINE FUEL LINES
PNEUMATIC LINES
REFRIGERATION
AIRCRAFT
RAILROAD EQUIPMENT
RIGGING EQUIPMENT
REFINERY EQUIPMENT
CHEMICAL LINES
AUTOMOTIVE EQUIPMENT
WATER AND GAS LINES
...AND DOZENS OF OTHERS

© 1952—TAC

TAC

TUBING APPLIANCE COMPANY
10321 ANZA AVENUE
Los Angeles, California

For more details circle **NED-2006** on enclosed inquiry slip

NEW COLORED SEAL

LASTS LONGER BECAUSE IT PENETRATES DEEPER!

Colored Newvar lasts as long as surface layers of concrete because it penetrates deeply into the pores. Forms a tough, smooth, colorful surface that prevents crumbling and dusting. Colored Newvar is water proof, dust proof, impervious to oil, grease, gasoline, naphtha, Kerosene, etc.

BEAUTIFY FLOORS OVERNIGHT!

Brush or mop Colored Newvar over clean floors at night . . . ready for use in the morning. One coat seals and protects, two coats preserve and finish your floors.

COLORED NEWVAR IN RED AND GREY

SEND FOR FULL INFORMATION TODAY!

THE **PENETONE** CO.
BOX ND-352, TENAFLY, N. J.

For more details circle NED-2007 on enclosed inquiry slip

HAND-FEED TURRET LATHE
short run precision machine has turret for 3, 4, 5 or 6 tools

Precision in machining operations and simplicity in setting up are combined in Hestika model HR 26 turret lathe, suited to economical production of single pieces or short runs. A short throw hand feed makes it possible to achieve short machining cycles. Turret can be used with three, four, five or six tools. One or more drilling spindles can be set up on turret tail stock for small holes. Single lever controls chucking, forward and reverse spindle speeds, chasing speeds and stopping of headstock spindle.

Bed accommodates compounds and tail stocks in all possible combinations. Interchangeable attachments are available for most machining operations. Bed length is 23½ in. and maximum collet capacity is 1 in. Spindle speeds are: high speed, 390-2400 rpm; thread cutting, 43-270 rpm; reversing, 130-800 rpm. Machine, built in West Germany, is available from **Kurt Orban Co.**, 205-A E. 42nd St., New York 17, N. Y.

For more details circle NED-2010 on enclosed inquiry slip

BARNESDRIL MAGNETIC COOLANT SEPARATOR
OFFERS SIMPLE, POSITIVE COOLANT CONDITIONING
For Production and Machine Savings!

REDUCE MACHINE MAINTENANCE
AVOID MACHINE SHUT-DOWNS
IMPROVE MACHINED FINISHES
CHECK THESE FEATURES:

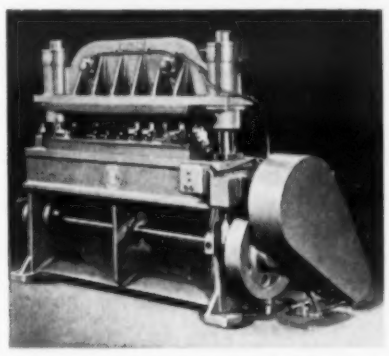
- Permanent ALNICO Magnets Insure Infinite Life
- Extra Long Magnetic Field Overcomes Viscosity Resistance On Small Particles
- Coolant Flow Directed Through 27½" Concentrated Magnetic Field
- Counter Rotation of Magnetic Drum Removes Non-Metallic Particles
- Interlocked Magnetic Field Assures Consistent Magnetic Attraction

Visit Booth 1808 for Demonstration and Latest Information on BARNESDRIL Magnetic Coolant Separators, or write direct for Bulletin 352.

BARNES DRILL CO.
850 CHESTNUT STREET ROCKFORD, ILLINOIS U.S.A.

For more details circle NED-2008 on enclosed inquiry slip

PUNCH PRESSES
perform blanking, forming, drawing and bending, plus other operations



Design of Wales twin column punch presses permits use for all types of blanking, drawing, forming and bending. Wales hole punching and notching equipment can be used and self-contained shearing attachment is available. Presses are equipped with pair of cylindrical ram guides which have 4-in. diameter and are positioned vertically at exactly 90 degrees. Actuating mechanism of ram operates inside vertical ram posts. Rapid action four-point clutch with sliding dog gives smooth action.

Large bearing areas on crankshaft distribute pressures and loads, thereby minimizing wear. Bottom face of ram is machined smooth for accurate die mounting. The 2-in. adjustment of ram is made by loosening lock collars, at each end of ram, turning crank to lower or raise ram, then tightening lock collars. Optional equipment includes knock-out attachment, punch shank adapter, pneumatic draw die cushions, friction-clutch arrangement and variable speed arrangement. Made by **Wales-Strippit Corp.**, 363 Payne Ave., North Tonawanda, N. Y.

For more details circle NED-2011 on enclosed inquiry slip

New -- FROM SKF!

The HESS-BRIGHT Series "SY" Unit Pillow Block!

Here are the design features:

- DuPont Fairprene Red Seal retains lubricant. Wiping action of seal against inner ring is practically frictionless.
- Rotating Flingers exclude dirt.
- Set-screws for ease of installation.
- Spherical outer ring compensates for initial misalignment.
- Alemite fitting for re-lubrication.
- Interchangeability with existing installations made possible by bolt hole spacing and center height features.
- Shaft diameters—1-3/16" to 2-15/16."

Contact your SKF Distributor, or write, **SKF INDUSTRIES, INC.**, Philadelphia 32, Pa., for complete details. 7322-C

SKF BALL AND ROLLER BEARINGS

IN EVERY INDUSTRY, SKF Puts The Right Bearing In The Right Place

For more details circle NED-2009 on enclosed inquiry slip

for low cost metal grinding

Because Jewelox Fibre Backed Discs grind better, last longer — they reduce grinding costs to a minimum. Jewelox Fibre Backed Discs will not curl or warp and resin bonding gives them outstanding durability.

Test Jewelox Fibre Backed Discs yourself. Prove to your own satisfaction that they are tops for use on high-speed pneumatic or electric grinders. Order Jewelox Fibre Backed Discs from your distributor or write Abrasive Products, Inc., 525 Pearl St., South Braintree 85, Mass.

SHARPER, TOUGHER

Jewel COATED Abrasives

CUT COSTS!

For more details circle NED-2012 on enclosed inquiry slip

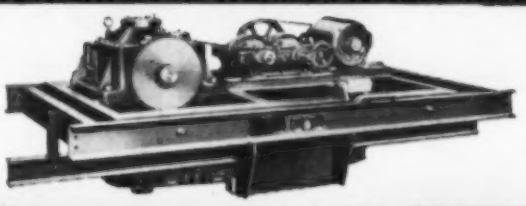
The FIRST Flying Carpet

was "FLOATED" by an Old Caliph in Bagdad

He mentioned it frequently in his famous Tales of the "Thousand and One Nights." Since then "air space" has been put into use for many mechanical devices.

Not a floating carpet — but a powerful pulling "work-horse" for conveyor systems is the

FLOATING DRIVE with AUTOMATIC CUT-OFF and LOAD INDICATOR



another FIRST by JERVIS B. WEBB COMPANY

For years a standard on Webb Conveyor systems, the patented Floating Caterpillar Drive enables automatic limit switch cut-off in case of jam, cushions starting load, and has an easily seen calibrated load indicator.

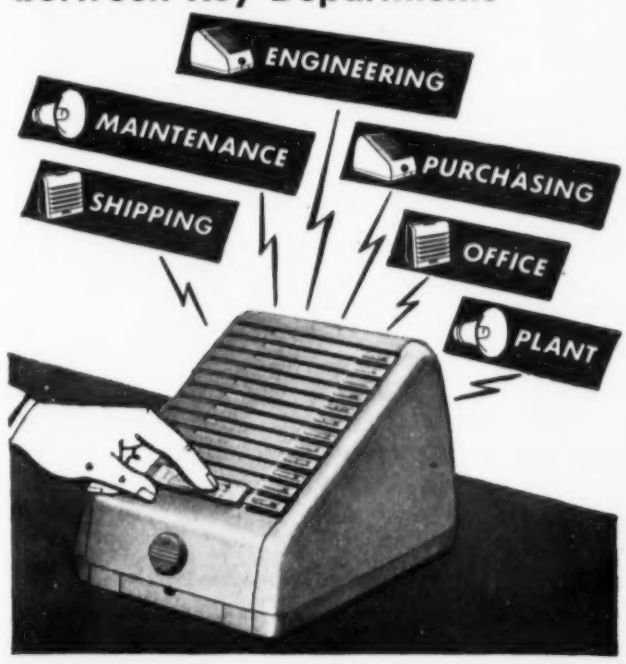
If external forces jam the conveyor, the springs are compressed to a point where the moving frame actuates a limit switch on the fixed frame, stopping the drive instantaneously. As soon as the jam is eliminated, the conveyor may be started immediately by push button. There are no shear pin headaches.

CONVEYOR ENGINEERS AND MANUFACTURERS
JERVIS B. WEBB COMPANY
8921 ALPINE AVE. DETROIT 4, MICH.
OFFICES IN PRINCIPAL CITIES
FACTORIES IN DETROIT . . . LOS ANGELES . . . HAMILTON, ONT.

For more details circle NED-2013 on enclosed inquiry slip

Step Up Production

with faster communication between Key Departments



EXECUTONE Intercom puts every department at your fingertips—*instantly!*

Production moves faster when you don't have to wait for information. With Executone you talk to any department, anywhere in your office or plant—*instantly!* No time lost running back and forth. No waiting on "busy" inside phones. You get more work done—*faster!*

In the NEW Executone voices are amazingly crisp and clear. Installed and serviced by Executone-trained technicians. Low cost Executone soon pays for itself in dozens of ways.

Executone INTERCOM SYSTEMS

GET THE FACTS

EXECUTONE, INC., Dept. C-6
415 Lexington Ave., New York 17, N. Y.

Without obligation, please send me full data on Executone Intercom. I am particularly interested in:

- ☐ INTER-OFFICE COMMUNICATION
- ☐ INTRA-PLANT COMMUNICATION
- ☐ MATERIALS HANDLING CONTROL
- ☐ SWITCHBOARD RELIEF
- ☐ INVENTORY CONTROL
- ☐ LOCATING PERSONNEL

Name.....Title.....
Firm.....
Address.....City.....

For more details circle NED-2014 on enclosed inquiry slip

Be fresh... stay fresh

wear a **DUPOR No. 20**
Water-Cooled Respirator

Double sponges dipped in water before wearing provide cool breathing even under hot, smoky conditions. Recommended for use of workers in paint shops, foundries, steel mills, oil refineries, chemists, firemen, etc. Face mask is of rubber, equipped with DUPOR "controlled breathing" valves. Wearer has a panorama view with no blind spots. Glasses or goggles can be worn with unit.

Sample sent
$2.50 pp

H. S. COVER
South Bend, Ind.

For more details circle NED-2015 on enclosed inquiry slip

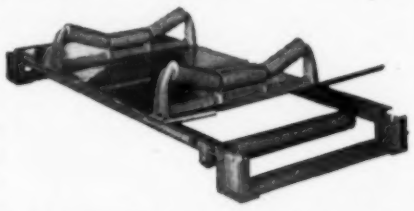
THREAD TOLERANCE CHART
for internal and external threads

Maximum and minimum dimensions and tolerances for both external and internal threads are shown on this pitch diameter thread tolerance chart. It can be used with both standard and new unified specifications. Coarse and fine thread series are included in a size range from ⅜ to 2¾ in. Arrangement of chart permits comparison between external and internal dimensions so that interference conditions can be avoided at the design stage. Available free from **Security Locknut Corp.**, 1500 North Ave., Melrose Park, Ill.

For more details circle NED-2018 on enclosed inquiry slip

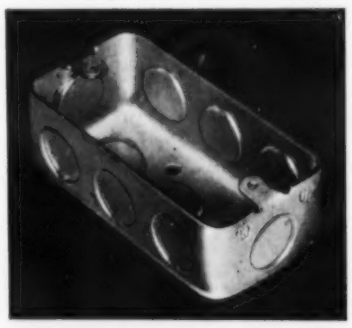
SECTIONAL BELT CONVEYORS
equipped with heavy duty idlers

Flexibility of design makes line of sectional belt conveyors adaptable to many mining, bulk material handling and industrial applications, as sections are chair-supported for easy mounting on floors, ramps or cross ties. Anchored foundations are available for long distance overland installations. Sections are hinged at mounting point to allow conveyor to conform to rolling or uneven terrain. All parts are interchangeable, nest and stack compactly and can be handled by one man. Open top construction facilitates installation of return length of belt when troughing idlers and deck plates are removed. All sections are equipped with Transall heavy duty prelubricated idlers. Terminal equipment is engineered to meet job requirements. Made by **Transall Inc.**, 130 N. Eleventh St., Birmingham 4, Ala.



For more details circle NED-2019 on enclosed inquiry slip

OUTLET BOXES
for heavy duty installations



Box type outlet boxes are now available in three new sizes for heavy duty industrial electrical installations. Boxes are drawn from heavy gage steel, with lugs tapped for easy installation, and are Underwriters' Laboratories approved. Three ½-in. knockouts can be found on each side, one at each end and three on the bottom. Sizes now in stock are: 1½ x 2⅛ x 4 in.; 1⅞ x 1⅛ x 4 in.; and 2⅛ x 2⅛ x 2 in. Made by **Keystone Mfg. Co.**, 23330 Sherwood Ave., Center Line, Mich.

For more details circle NED-2020 on enclosed inquiry slip

FILL CARS *Faster*

with an **S-A BOX CAR LOADER**

One man, with an S-A Box Car Loader, can make quick work of loading and trimming a box car. The loader operates without attention after it is placed in the car, and flow of material is started. This handy machine automatically loads and trims in a fraction of the time required by hand methods. Exposure of operator to dust is reduced to the minimum. Save time and manpower with this standard S-A portable loader . . . It handles loose granular material up to 2-inch lump size.

Write for Bulletin No. 948 and full details.

STEPHEN S-ADAMSON MFG. CO.

TELLEVEL—Bin Level Controls
Car Loaders
Variable Speed Reducers
Car Pullers
SealMaster Ball Bearings
Winches
Saco Speed Reducers

12 RIDGEWAY AVE., AURORA, ILLINOIS

For more details circle NED-2022 on enclosed inquiry slip

GOVERNMENT REQUIRED on all Defense Contracts

TRANSPARENT WORK RECORD HOLDERS

Because they keep work records clean and understandable, reduce costly mistakes in office and factory, and step up production, transparent work "ticket" holders are a required "must" on defense contracts. T. P. A. envelopes by NAPLASCO are the quality leaders, featuring crystal clear plastic, leatherette bindings and reinforced corners. They are needed wherever men work . . . to eliminate "Misunderstoods", confusion and alibis . . . and will save you time, money and headaches.

Naplasco
***T. P. A. HOLDERS**

Come in sizes and styles to meet your special needs . . . for work records, job ticketing, material control and many other uses.

Write for low prices. FREE SAMPLE while supply lasts.

TRADE MARK

Makers of Binder envelopes • Blue Print Holders
Workshop Envelopes • I. D. Card Holders
Billfold Inserts • Plastic Specialties.

NATIONAL PLASTIC COMPANY
16 EAST 23RD STREET, NEW YORK, N.Y. • (GRamercy 7-1399)
8 SOUTH DEARBORN, CHICAGO, ILLINOIS • (CEntral 6-0025)
Main Office and Factory
2591 E. FOOTHILL BLVD., PASADENA, CALIF. • (RYan 1-8147)

For more details circle NED-2016 on enclosed inquiry slip

an ACCO product — Registered WIRE ROPE SLINGS

*featuring DUALOC**

• The DUALOC Ending produces the strongest wire rope sling made. Two collars insure uniform strength from sling to sling. Actual strength certified by warranty certificate. Preformed Green Strand wire rope with steel core assures maximum resistance to kinking.

Popular sizes in distributors' stocks for immediate delivery.

**Trade Mark Registered*

ACCO
WIRE ROPE SLING DEPARTMENT
AMERICAN CHAIN & CABLE
TRADE MARK
Wilkes-Barre, Pa., Chicago, Denver, Houston, Los Angeles, New York, Odessa, Tex., Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

Registered Wire Rope Slings

For more details circle NED-2023 on enclosed inquiry slip

Job-Proven PLASTIC ROCK FLOORS

Save priceless production time! Renew old floors over the week-end to last for many years. Heavy traffic only packs denser. Non-skid, noiseless, spark-proof; bonds and feather-edges perfectly on concrete, wood or steel. Each Plastic Rock unit is complete; nothing else to buy; no guesswork; maintenance crew or contractor can apply.

Get free Bulletin N-3.

UNITED LABORATORIES, INC.
16804 Euclid Avenue, Cleveland 12, Ohio
FLOORING • ROOFING • SPECIAL PAINTS
Field Representatives Coast to Coast

For more details circle NED-2017 on enclosed inquiry slip

KENDALL MILLS... solves tough handling problem

Buschman CABLE CONVEYORS
SPEED COTTON MILL'S DOUBLED CAPACITY

Three Buschman "Universal" Cable Conveyors carry in-process cotton from one department to another in Oakland Plant of Kendall Mills, supplier to Bauer and Black, maker of famous Curity surgical gauze dressings.

Buschman Cable Conveyors, over 2400 ft. in length, smoothly handle high production of this enlarged modern mill. Standard stock units, ease of installation, lower initial cost, lower maintenance cost, small power requirements, time saving and floor-space saving features are reasons why "Universal" is in greater demand than ever, for handling light and medium weight loads.

Write for Bulletin 41.

The E. W. Buschman Co., Inc.
Spring Grove at Winton Place
Cincinnati 32, Ohio

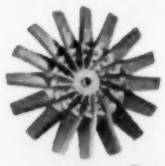
PRODUCE MORE ... FOR LESS with Buschman Conveyors

For more details circle NED-2021 on enclosed inquiry slip

Designed for long, trouble-free service
B.F.C. **Industrial Propeller Fan Wheels**

Type "IC" Propeller Fan Wheels
(24, 30, 36, 42 and 48 inch diameters)
. . . for use in free discharge fans and ventilators, for spot ventilation in steel mills, foundries, heavy industrial plants, etc.

Type "LS" Propeller Fan Wheels
(24, 30, 36, 42, 48, 54, 60, 72, 84 and 96 inch diameters)
. . . for use in power ventilators, cooling towers and similar applications. Larger sizes available for special applications.



Type "HP" Propeller Fan Wheels
(24, 30, 36, 42, 48, 54, 60 and 72 inch diameters)
. . . for use in high pressure ventilators, tube axial type fans and similar applications where higher pressures are encountered.

For Further Information, Write to:

BALTIMORE FAN COMPANY
(A Division of Baltimore Aircoil Co., Inc.)
2635 Mathews St. Baltimore 18, Md.

For more details circle NED-2024 on enclosed inquiry slip

"Stop-Go"
FLOW CONTROL
FOR BINS, HOPPERS, TANKS, ETC.

with TELLEVEL Bin-Level Control

Mount a TELLEVEL near the top and another near the bottom of your storage bin . . . As the material-level falls or rises, the light pendant is pushed aside . . . Automatically *starts or stops* conveyor, elevator or pump . . . Can be furnished for bulk materials or liquids.

Rising Level of Material Tilts Float-Ball and Stops Conveyor

Write for TELLEVEL Bulletin No. 1048.

STEPHENS-ADAMSON MFG. CO.
Tellevel—Bin Level Controls · Car Loaders · Car Pullers · Winches · SealMaster Ball Bearings · Saco Speed Reducers
12 RIDGEWAY AVE., AURORA, ILLINOIS

For more details circle NED-2025 on enclosed inquiry slip

if...

—YOU cut steel to irregular shapes of all kinds . . . circles . . . squares . . . rectangles . . . straight lines with square or beveled edges . . .

—YOU demand precision, production line shape cutting . . .

—YOU work with steel plates, slabs, billets, or forgings . . . in metal up to 6-inches or more in thickness . . .

Then you'll want this easy-reading 12-page Airco No. 50 Travograph booklet. Just pick up your pen and send us your request on your business letterhead today. Address: Advertising Department, Air Reduction Sales Company, 60 East 42nd Street, New York 17, N.Y.

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Dealers and Offices in Principal Cities

For more details circle NED-2026 on enclosed inquiry slip

• Up go parts, materials, assemblies or equipment. There's a hoisting, load handling job in virtually every kind of industry and every field of trade.

The right type of hoisting equipment for the job means maximum efficiency — safety. To get equipment best suited to the "operation up" requirements, it's good policy to contact David Round & Son. Building hoisting equipment has been a David Round specialty for over 80 years.

David Round standard unit equipment includes Chain Hoists, Electric Hoists, Traveling Cranes, Trolleys and Winches. General Catalog No. 81 gives full information. David Round & Son, 35025 Aurora Road, Cleveland 22, Ohio.

Manufacturers Since 1869

David Round
HOISTING EQUIPMENT

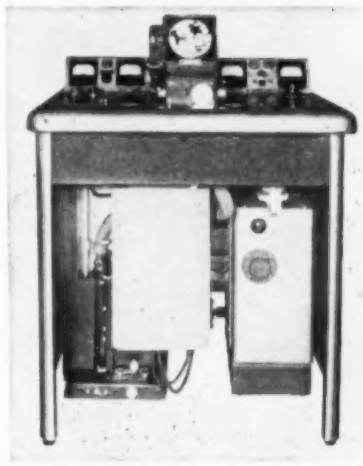
For more details circle NED-2027 on enclosed inquiry slip

PORTABLE LIGHT
grounded type in several models

Three-wire convenience outlet is incorporated in socket of grounded portable light in 5000-G series. Two cage designs are offered: one with concentrating end lens and rotary reflector for focusing light where needed and other with standard No-Rol heavy steel wire cage and reflector. Guards have molded phenolic handles which are nonconductive and heat and impact resisting. Complete assembly resists oils, greases, some acids, flame, moisture and abrasion. Guards are equipped with Levolier switch and are furnished with or without three-wire red thermoplastic cord. Made by **McGill Mfg. Co.**, 1250 N. Lafayette St., Valparaiso, Ind.

For more details circle NED-2028 on enclosed inquiry slip

ELECTRON MICROSCOPE
no distortion at any magnification



Features of Electrostatic electron microscope include freedom from astigmatism, ease of alignment, distortionless image at all magnifications and consistent high image quality at direct magnifications up to 20,000 times. Image of specimen does not rotate with magnification changes, this being of importance in stereo studies. Because electrical centers in electrostatic lenses coincide with geometrical center, alignment is simplified. Filaments of high intensity electron gun are easily replaceable. Microscope has compact power supply with variable output voltage. It is equipped with large area viewing screen and built-in camera. Specimen holder permits rapid change and setting of specimen. Instrument is adaptable for electron diffraction techniques and making stereo electron micrographs. Made by **Farrand Optical Co.**, 4401 Bronx Blvd., New York 70, N. Y.

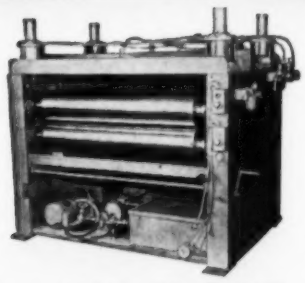
For more details circle NED-2029 on enclosed inquiry slip

DO YOU KNOW? You don't slip in bath tubs and showers when ten Safety-Walk nonslip treads are affixed to the bottom of the tub. Treads are self-adhering waterproof fabric which has a surface coating of fine silicon carbide abrasive. This same idea can pay dividends in industrial plant shower rooms. Made by Minnesota Mining & Mfg. Co., 900 Fauquier St., St. Paul 6, Minn.

For more details circle NED-2030 on enclosed inquiry slip

UNION AUTOMATIC COMPOUND SPREADERS

SAVE *8 WAYS



1 "Die life increased 75%."
2 "Production increased 20%."
3 "Compound saving of 16%."
4 "Rejects reduced 10%."
5 "One helper eliminated."
6 "Paid for itself in 54 days."
7 "Able to use salvage stock for some operations."
8 "25,000 more pieces before changing dies."

MODELS TO FIT ANY STOCK UP TO 96" WIDTH

Union is the foremost designer and manufacturer of roller coating machines for application of drawing or stamping compounds and protective coatings.

Models may be equipped with hardened steel, or with neoprene-covered rolls—also with heated or cooled rolls—to meet your individual requirements.

*The above claims are based on actual statements by users, both large and small—a number of whom have ordered a second and third machine.
Complete data and agent's name on request. Union will design and/or manufacture coating machines to meet your specific requirements.

UNION TOOL CORP.
314 E. MARKET ST., WARSAW, IND., U.S.A.
USERS SAY UNION CUTS COSTS, SPEEDS PRODUCTION

For more details circle NED-2031 on enclosed inquiry slip

FOR GREATER CONTROL OVER WELD POWER...

Robotron "CUSHIONED POWER" WELDING TIMERS

HELPS MANUFACTURERS MEET EXACTING SPECIFICATIONS IN WELDING OF ALUMINUM, STAINLESS and NICKEL ALLOY STEELS, COATED OR PLATED METALS, OR ANY COMBINATION OF DISSIMILAR METALS — Regardless of Conductivity!

This new concept of Vernier Control, preheats and prepares the welding material, welds and tempers according to specific needs.

- Reduces metal Spewing, Cracking and Surface Indentation.
- Reduces Weld Power KVA (heat) demand.
- Reduces usual required Electrode Pressures.
- Reduces Electrode Pickup and Cleaning Time.
- Reduces Welding Costs—Increases Production.
- Assures maximum Ductility and Constant Uniformity.
- Can be Added to YOUR PRESENT EQUIPMENT with Ease.
- Can be used in Single Phase Welding.

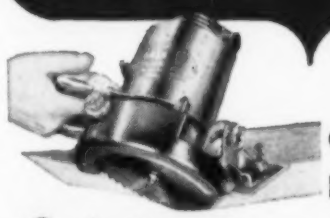
Factory time-tested and proven like all other Robotron Electronic Control Equipment, this new "Cushioned Power" Welding Timer features Compactness, Maximum Accessibility, Easy Installation, Easy Maintenance and Finger-Tip Modulated Power Control.

FREE
ASK FOR New ROBOTRON "Cushioned Power" WELDING TIMER CATALOG TODAY!

Robotron CORP.
*T. M. Registered
21310 W. Eight Mile Rd., Detroit 19, Mich.

For more details circle NED-2032 on enclosed inquiry slip

magic pivot Does It!



$ for $
and lb. for lb.
NEW MAXAW 70
Cuts deeper at 45°

Only $69.50
Heavy-Duty All Ball and Roller Bearing MAXAW 70

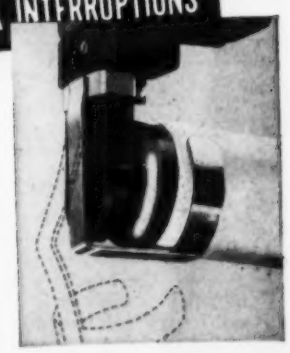
Now you get a heavy-duty, industrial saw that weighs only 10 lbs., uses a 6 3/8" blade, and cuts 1 7/8" at 45°. . . something no other industrial saw with a blade up to 7 1/4" will do. **magic pivot** makes this possible. Yes, the simple but long-overlooked engineering achievement of putting the pivot point closer to the saw shaft brings you this matchless performance found only in **magic pivot** MAXAWS. In addition, hard-biting "stub-radius" blades stand 3 to 4 more sharpenings and still keep their 45° cutting capacity . . . last twice as long. The MAXAW does more work . . . faster work . . . and costs less.

Free Phamphlet — Find out what magic pivot can do for you. Get the complete story. Simply drop a card to CUMMINS-CHICAGO CORP. today.

Cummins Portable Tools
DIVISION OF
Cummins-Chicago Corp.
4740 N. Ravenswood Ave. • Chicago 40, Ill.

For more details circle NED-2033 on enclosed inquiry slip

STOP! INJURIES AND WORK INTERRUPTIONS from falling fluorescent-tube accidents



Economical, easily installed Den-El SAFETY GUARDS hold flourescent tubes firmly in sockets whenever a sudden jolt or continuous vibration occurs.

Made of resilient stainless steel, permanent installation requires simply tightening nut on a precision-made machine screw. The band that holds tube, as shown in photograph, is easily pulled aside when lamps are cleaned or replaced and resumes holding position when released.

Two guards are required for each tube. They are made in two sizes: for 40 watt tube at 17c each and 100 watt tubes at 20½c each. Don't wait for accidents to happen! Den-El guards are economical protection against falling glass and possible serious injury in factories, shops, offices, stores.

ORDER TODAY DIRECT OR SEND FOR COMPLETE DATA
ALL ORDERS SHIPPED DIRECT FROM PHILADELPHIA

A DEPENDABLE GUIDE TO SAFETY
GENERAL SCIENTIFIC EQUIPMENT COMPANY
TESTED INDUSTRIAL SAFETY PRODUCTS
2701 W. Huntington St.
Philadelphia 32, Pa.

RESPIRATORS • PUMPS • GOGGLES • SHIELDS • GLOVES • APRONS • HELMETS

For more details circle NED-2034 on enclosed inquiry slip

BROOKS SINCE 1876 Connects all WATER PROBLEMS IN YOUR PLANT OPERATIONS ECONOMICALLY FROM RAW WATER COMING IN— TO WASTE WATER GOING OUT

✓ Boiler Water Treatments ✓ Water Line Treatments ✓ Cooling Water System Treatments ✓ Brine System Treatments ✓ Waste Water Treatments ✓ Zeolite Softener Treatments ✓ Consulting Service

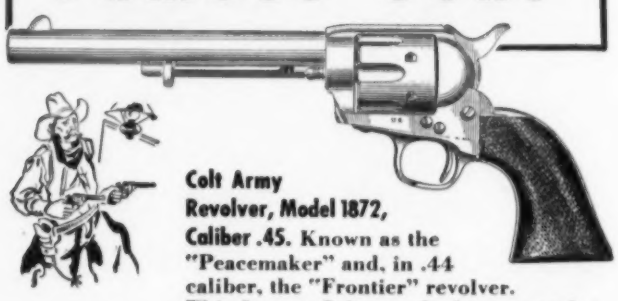
Brooks Service Engineers are available anytime, anywhere for consultation, without obligation. They can help you reduce costs and improve efficiency. Call Brooks!

Write for Descriptive Technical Data

BROOKS Chemicals, Incorporated
3304 East 87th St. Cleveland, Ohio
Plants at CLEVELAND, OHIO and HAMILTON, ONTARIO
Offices in Principal Industrial Cities
QUALITY SERVICE THROUGH SCIENTIFIC RESEARCH

▲ For more details circle NED-2035 on enclosed inquiry slip ▲

Famous Guns



Colt Army Revolver, Model 1872, Caliber .45. Known as the "Peacemaker" and, in .44 caliber, the "Frontier" revolver. This famous Colt was *the law west of the Mississippi!* Weight and ruggedness made it a convenient means of administering a "pistol whipping".

Model 1808 Navy Pistol, Caliber .64, made by Simeon North of Berlin, Conn. Boarding pistols like this rendered valuable service in the War of 1812. In building them, North actually used a modern mass production technique —*standardized parts!*

Instant-heating Weller Soldering Gun for light or heavy work. Dual heat greatly increases tip life. Switch instantly to high or low heat as job requires. Pre-focused spotlights end "blind soldering". Exclusive tip-fastening arrangement assures full, constant heat. High-impact plastic housing. Perfect balance. Low-cost replaceable tips. Pays for itself in a few months. See at your Distributor or write for Bulletin direct.

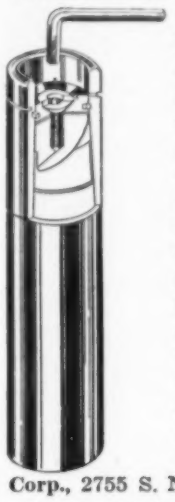
Get SOLDERING TIPS, new Weller Handy Guide to faster, easier soldering. 20 pages fully illustrated. Price 10c at your Distributor or order direct.

Weller BETTER FROM GRIP TO TIP!
SOLDERING GUNS 809 Packer Street, Easton, Pa.
The Finest Soldering Tool for the Finest Craftsmen

▲ For more details circle NED-2036 on enclosed inquiry slip ▲

DIE SET GUIDE PINS aid removal of punch holders

Troublesome locking or binding problems encountered when uneven pressures are exerted in separating punch from die holder on two or four post die sets is eliminated through use of these removable cap guide pins. Removing cap frees punch holder at upper part of pin where it is most apt to tilt and bind. Cap is removed by loosening socket head screw which rotates in collar and serves as jack. Additional feature is that only cap need be replaced when pin wears because of long press runs instead of complete pin and bushing. Oversize caps can be furnished to compensate for wear. Deep recess in top of guide pin cap forms oil reservoir, and openings through cap wall to outer bearing surface allows oil to seep out and lubricate pin and pin bushing. Pins are available on die sets presently manufactured or can be adapted to sets now in use. Made by **Superior Steel Products Corp.**, 2755 S. Nineteenth St., Milwaukee 7, Wis.



▲ For more details circle NED-2037 on enclosed inquiry slip ▲

STRAIGHTENING PRESS safety device prevents overbending

Designed for extremely sensitive work, this precision hydraulic straightening press has automatic stroke limiter that protects against overbending. Vertical shipper rod is linked to hand lever which serves as manual control. In shifting this rod up or down, fluid volume from pump is increased or decreased in proportion to lever displacement. Stop attached to rod is engaged by ram in its descent and halts ram at any predetermined point. Shipper rod can be rotated by push-button controlled motor to accomplish rapid stroke alterations. Micrometer setting is made with handwheel. Automatic counter indicates ram extension within 0.01-in. Dial gage shows applied force from 0 to 150 tons. Daylight ranges from 10 to 30 in., throat depth is 19 in., table measures 21 x 108 in., pressing speeds are 0 to 48 ipm, and retracting speeds are 0 to 65 ipm. Made by **Hufford Machine Works Inc.**, 1701 E. Grand Ave., El Segundo, Calif.

▲ For more details circle NED-2038 on enclosed inquiry slip ▲

DO YOU KNOW? Among the first industrial applications of radioactive cobalt wire is its use for examining steel castings for internal defects. Ampoule of irradiated cobalt wire is mounted over casting and rays penetrate steel ranging up to 6 in. thick. Photographic film pictorially records any defect in part. Process is used by Empire Steel Castings, Inc., Reading, Pa.

▲ For more details circle NED-2039 on enclosed inquiry slip ▲

Name your brush need
Automotive
Aviation
Industrial
Fractional hp
Speer can meet it!

Have a brush problem? Speer makes over 100 different grades to meet every application. Extruding, molding, baking, finishing, application testing . . . every step is carefully controlled in Speer's own plants to make certain you get the maximum in brush effectiveness. For more details:

Write today for our free booklet
"Speer Carbon Products"

A Speer application-tested brush for every use:
motors • rotary converters
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subways • ignition systems
starters • power plants
Diesel locomotives
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SPEER Carbon Co.
St. Marys, Pennsylvania
SUBSIDIARIES:
Jeffers Electronics, Inc. Speer Resistor Corp.
International Graphite & Electrode Corp.

▲ For more details circle NED-2040 on enclosed inquiry slip ▲

GUARANTEED!
HOMER permanent "non-electric" magnetic pulleys are guaranteed to equal or exceed the performance of electro magnetic pulleys

With HOMER non-electric Permanent Magnetic Pulleys, you eliminate Power Failures; Burn-Outs; Atmospheric and Temperature restrictions; Wet or Dry locations, because HOMERS are not affected by these natural elements. Homers are available for light, standard or heavy-duty service. Write today for bulletins describing this line of GUARANTEED HOMER MAGNETIC PULLEYS.

Homer The HOMER MANUFACTURING CO., Inc.
DEPT. I-25 LIMA, OHIO
Producers of Magnetic Separator Equipment Since 1923

▲ For more details circle NED-2041 on enclosed inquiry slip ▲

the NEW FISHER-GOLDMAN MIXER

The Fisher-Goldman Mixer has a unique arrangement of stirrers and baffles; vastly more effective than ordinary stirring or mixing.
Capacity up to three gallons; useful for small production batches, laboratory, pilot plant blends. Completely new departure in mixing technique. Price $145.00.
Write today for complete information.

The arrows trace the fast, outward-upward-over-down movement of the mixture which produces exceptionally thorough blending.

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FISHER SCIENTIFIC COMPANY
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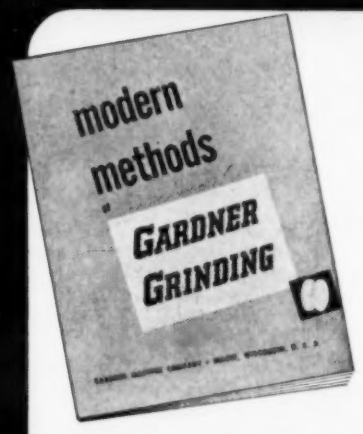
You'll Want This New Book!

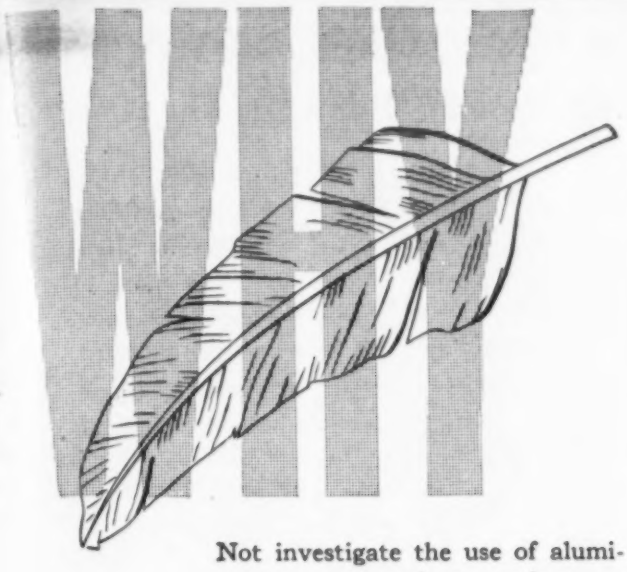


FREE!
32-page book with 25 examples of how flat surface grinding problems were solved

Complete production information given on flat surface grinding of work pieces that include coil springs, cement blocks, bathtubs, brake linings, and many others — grinding one surface or two parallel sides in one operation. An idea book . . . send for your copy today!

GARDNER MACHINE COMPANY
460 Gardner Street • Beloit, Wis.

▲ For more details circle NED-2043 on enclosed inquiry slip ▲



Not investigate the use of aluminum or magnesium castings on *your* product?

Almost a half-century of experience producing quality Well-Cast light metal castings in sand, semi-permanent and permanent mold-Well-Made Wood and Metal Patterns.

THE WELLMAN BRONZE & ALUMINUM CO.

DEPT. 15, 12800 SHAKER BLVD., CLEVELAND 20, OHIO

For more details circle **NED-2044** on enclosed inquiry slip

EXAMPLE: Working with the North Electric Manufacturing Co., Galion, Ohio, we developed a new miniature hermetically sealed relay to meet exacting military requirements. Features include an 8-terminal sealed header .600" O.D. and a new design balanced armature relay, sealed in a 7/8" x 7/8" x 7/8" drawn aluminum can. The entire unit may be panel mounted from either the top or bottom. The unit can be furnished either with a dry air fill or vacuum-pumped and pressure filled with dry nitrogen.

HAVING HEADER TROUBLES? We make all types of Sealed Headers, ranging from simple 2- and 3-electrode, crystal holder bases, and standard octal headers, to 14- and 16-terminal headers for sealed Transformer and Relay applications. (Also a variety of special-design headers and terminals.) Write for catalog and quotes.

Hermaseal THE HERMASEAL COMPANY, Inc.

Elkhart 15, Indiana

For more details circle **NED-2045** on enclosed inquiry slip

Accurate . . . Compact . . . Durable

the HOLTZER-CABOT INSULATION RESISTANCE TESTER

Here is the electronically-controlled insulation resistance tester that gives lifetime, trouble-free service. Requires no maintenance—easy to operate. Check these desirable features:—

- lightweight—only 3 lbs.
- accurate, easy-to-read scale
- broad range—Model 10-B, 0 to 100 megohms Model 10-M, 0 to 1000 megohms
- rugged, waterproof case of cast aluminum
- hand-cranked brushless generator—no batteries
- signal lights indicate when proper voltage is delivered
- operates in any position
- comes with leather carrying case, two 10 ft. leads and instruction booklet

Handy . . . . . Efficient . . . . . Inexpensive

WALTER F. SUTTER, Distributor
280 Beacon Street, Boston 16, Mass.

HOLTZER-CABOT
DIVISION OF NATIONAL PNEUMATIC CO. INC.
fine electrical apparatus since 1875

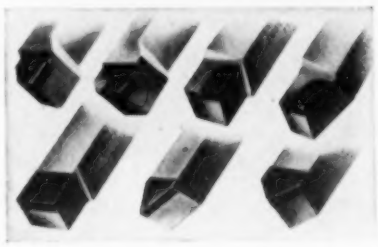
For more details circle **NED-2046** on enclosed inquiry slip

SOLENOID AIR VALVE
for double-acting cylinders

Made with full ¼-in. pipe orifice area through the unit, Mac No. 501 four-way air valve is available for actuating double-acting cylinders. Operation is by direct solenoid control and spring return of aluminum spool which is only moving part. Bores are honed, polished, hard-chrome plated and mirror finished for two O-ring seals, the only wearing parts. Valve measures 5 x 2½ x 2½ in. and consists of cast iron base, bronze body and retainers, aluminum spool and solenoid with aluminum cover. Current requirements are 0.8-amp inrush and 0.2-amp holding at 115 v, 60 cycles. Valve can be held energized for any period of time and is available for any voltage or cycle. Mounting can be in any position. Exhaust port can be restricted for reducing cylinder piston speeds. Made by **Mechanical Air Controls,** 15313 W. Eleven Mile Rd., Royal Oak, Mich.

For more details circle **NED-2047** on enclosed inquiry slip

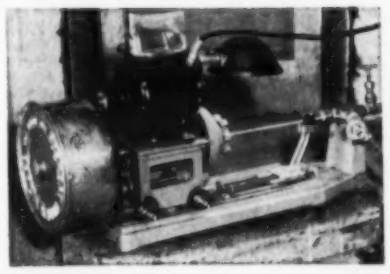
MACHINING TOOLS
offered with various carbides



Complete line of standard carbide-tipped tools for turning, boring, facing and threading includes stocked tips of Carboloy, Kennametal and other brands of carbide. Policy enables users of Super tool line to specify the brand of carbide they prefer on tools of this company's design. Line consists of wide variety of types and sizes. Made by **Super Tool Co.,** 21640 Hoover Rd., Detroit 5, Mich.

For more details circle **NED-2048** on enclosed inquiry slip

PIPE CLEANING MACHINE
operates with water turned on

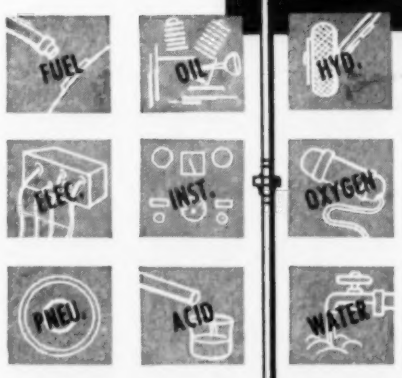


Mineral deposits which build up inside water pipes causing restricted flow can be effectively cleaned out with the Water Wizard pipe cleaning machine without necessity of turning off pressure. First, hose from side of machine is run to sewer or waste pipe. Meter or valve is disconnected and hose from front of machine is connected in place of meter. Power driven snake which revolves at 90 rpm is then fed through pipe. Loosened deposits are washed by water pressure through unit and into sewer. Machine is available through **R. A. Poekert,** 3141 McRoberts Rd., Pittsburgh 34, Pa.

For more details circle **NED-2049** on enclosed inquiry slip

throw your wrench away

CONNECT or DISCONNECT *any* fluid or electric line *without* a wrench



Join or separate any line with your fingers. You do it in *seconds* instead of minutes, when you use leakproof *WIGGINS* Inst-O-Matic couplings. We design to meet your requirements.

SUBMIT YOUR PROBLEM. WIGGINS Inst-O-Matic couplings can reduce your costs. Write today. There's a qualified representative near you.

Wiggins
Aircraft Division
E. B. WIGGINS OIL TOOL CO. Inc.
3424 E. Olympic Blvd., Los Angeles 23

INST-O-MATIC COUPLINGS

For more details circle **NED-2050** on enclosed inquiry slip

with AURAND CLEANING TOOLS

Clean off accumulations of scale, paint, rust or any foreign matter from any hard surface with Aurand Cleaning Tools. Toothed cutting wheels, loose pinioned on rotating head chip away accumulations at high speed. Positive depth shoe prevents cutting into permanent surface and assures uniform cleaning of entire area.

Two sizes in electric or pneumatic models.

For full details, write Dept. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

For more details circle **NED-2051** on enclosed inquiry slip

HERC-ALLOY SLING CHAINS

PREFERRED . . . because of proved advantages in use

Production Executives and Safety Directors look for many things in a sling chain—greatest strength, maximum safety, lighter weight, handling ease, resistance to wear, minimum cost against service life.

Because they found all these advantages in HERC-ALLOY by on-the-job experience, it became a matter of course to prefer and specify HERC-ALLOY Sling Chains.

Write for illustrated Data Book No. 3 which contains helpful information on sling chain selection and use.

COLUMBUS McKINNON CHAIN CORPORATION
(Affiliated with Chisholm-Moore Hoist Corp.)

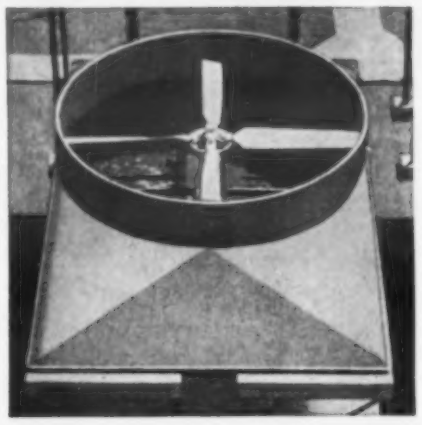
GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.
***District Offices:* New York • Chicago • Cleveland**

Other Factories at Angola, N. Y., Dixon, Ill., St. Catharines, Ont., Can., and Johannesburg, South Africa.

For more details circle **NED-2052** on enclosed inquiry slip

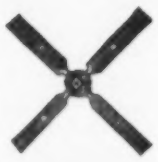
Aeromaster

FANS Cut Power Costs 10%!



Aerodynamic design provides more cooling per horsepower

KOPPERS Aeromaster Fans are available for any and every sizable industrial cooling application. Standard models range from 5 to 24 ft. dia., with 4, 6 or 8 blades per fan. Capacities up to 750,000 c.f.m. Engineering service furnished for special low pressure propeller fan installations. Sales engineers available in all principal U.S. cities, as well as in Europe. For complete, detailed information on how Aeromaster Fans can save you money, tell us the size and type of equipment to be cooled. Address your letter to: KOPPERS COMPANY, INC., Aeromaster Fans, 283 Scott Street, Baltimore 3, Maryland.



KOPPERS

KOPPERS COMPANY, INC.

▲ For more details circle NED-2053 on enclosed inquiry slip ▲

REVOLUTIONARY NEW INVENTION!

Makes DRY PHOTOCOPIES of anything instantly!

THE APECO Auto-Stat

ALL ELECTRIC! FULLY AUTOMATIC!

NEW! NOTHING ELSE LIKE IT! SO LOW COST! SO COMPACT! About same size as a typewriter—and costs less!

New, low-cost machine makes photo-exact copies from original letters, forms, bids, contracts, invoices, reports, blueprints—right in your own office.

Here is the first major advancement in office copying in the last 15 years. Can save you up to 80% on your copying jobs! Eliminate costly retyping, hand copying, checking or sending outside for expensive copying service. The Auto-Stat is the first low-cost machine that makes error-proof, legally acceptable, black and white *photo-like* copies—WITHOUT SLOW, MESSY DEVELOPING, FIXING, WASHING OR DRYING. It's fast—only 2 simple steps instead of 12 required by old methods. Makes prints instantly from any originals—whether printed on one or two sides. Requires no dark room—and any inexperienced clerk can operate it!

✓ *No developing* ✓ *No washing* ✓ *No installation*

✓ *No fixing* ✓ *No drying* ✓ *No fumes*

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Pictures and tells complete Auto-Stat story—shows you how you can use this revolutionary new photo-copy method.

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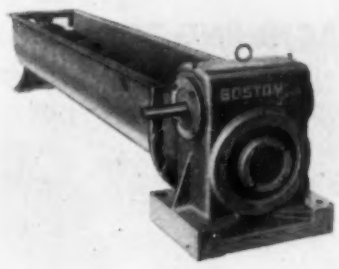
▲ For more details circle NED-2054 on enclosed inquiry slip ▲

PLANER CLAMPS hold work pieces to largest planers

Loading and unloading of work on planer beds is facilitated by Jumbo and Lil-Giant jaw clamps because only one adjusting screw needs to be loosened. Jaw travels in and down at 45-degree angle, forcing work horizontally against opposite clamps and downward against table, resulting in a single, powerful clamping action. Controlled centering is quick and simple, and elongated slot has back taper which prevents slippage. Hardened throughout, clamps are equipped with T-nuts to fit all large planers and with varying nose-grips for special requirements. Made by **J & S Tool Co.**, 477A Main St., East Orange, N. J.

▲ For more details circle NED-2055 on enclosed inquiry slip ▲

SCREW CONVEYOR DRIVE is worm gear speed reducer



Designed for convenient application and efficient operation of 9-in. diameter screw feed conveyors, model C9-U52 Reductor has built-in adapter flange for ready installation by direct mounting with the conveyor trough. Separate sub-base assures precise alignment. Drives are also furnished with special diameter output shafts. Offered by **Boston Gear Works**, 69 Hayward St., Quincy 71, Mass.

▲ For more details circle NED-2056 on enclosed inquiry slip ▲

MOTORIZED CARD FILE holds 90,000 3 x 5-in. cards

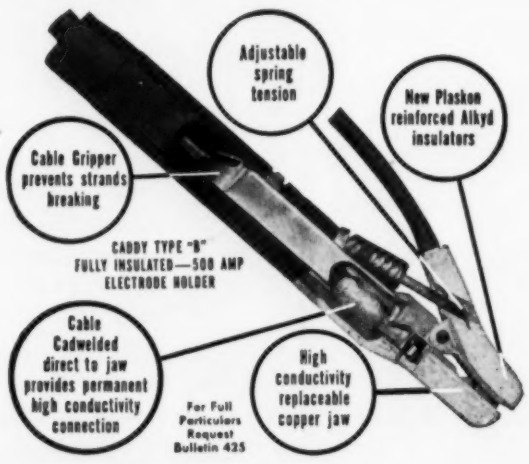
By pressing automatic pushbutton control on Simplafind motorized card file, section of file desired comes to operator in average time of less than 3 seconds. Unit requires floor space of about 12 sq ft and holds 40,000 5 x 8-in. cards, 82,000 tabulating size cards or 90,000 3 x 5-in. cards. Card trays are brought to operator at desk or counter height, as selected by operator. They are presented in series of 10-in. rows, all within comfortable reach. From 4000 to 9000 cards are within reach at one time. Trays are light, easily removable angle front type. Made by **Simpla Research & Mfg. Co.**, 423 Fourth Ave., New York 16, N. Y.

▲ For more details circle NED-2057 on enclosed inquiry slip ▲

A Completely NEW Principle in ELECTRODE HOLDER DESIGN

WEIGHS ONLY 25 OZ.

Cool Running for the life of the holder



No mechanical connections — A solid copper circuit from welding machine to electrode

ERICO PRODUCTS, INC.

2070 E. 61st PLACE • CLEVELAND 3, OHIO

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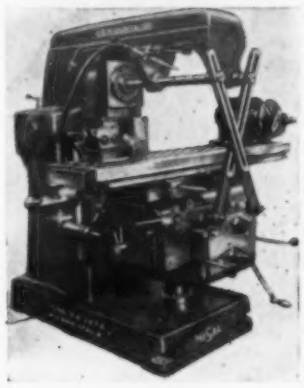
THE BEST IN IMPORTED

EUROPEAN MACHINE TOOLS



- TOOL ROOM LATHES
- SCREW MACHINES
- SHAPERS 10" TO 38"
- PUNCH PRESSES
- POWER BRAKES
- POWER SHEARS
- SPECIAL MACHINES
- UNIVERSAL MILLING MACHINES
- RADIAL DRILLS
- TOOL GRINDERS

As exclusive importers, we are equipped to display, sell and service these machines. We offer a very attractive delivery. Parts and service always available. We will be happy to consult with you on any of your machine tool requirements.

ANDREW GORRETTA & CO.

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FOR DEFENSE INDUSTRY MACHINIST WORKMAN FARMER

FIRST IN METAL TOOL BOXES

CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition.

WATERLOO METAL BOXES AND CHESTS

Waterloo

VALVE SPRING COMPRESSOR CO.
WATERLOO, IOWA

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Here is PROTECTION FOR SMALL MOTORS and ELECTRICAL EQUIPMENT

FIREGUARD FUSE COUPLING

You can protect all types of electrical equipment, delicate electrical instruments and machines with FIREGUARD—the sensational new fuse coupling.

The use of FIREGUARD reduces the number of motor burn-outs on original equipment . . . cuts the cost of service or replacement by protecting the equipment . . . and provides an EXTRA SELLING FEATURE for your product when FIREGUARD is attached to the original equipment before shipping. Takes only a second to attach FIREGUARD to product.

Write today for complete information on this money-saving, time-saving, low cost fuse coupling. State size of motor, or wattage, and any other information about your equipment that will enable us to give you the greatest possible technical help.

F. H. SMITH MFG. CO.

NATIONAL SALES OFFICE

3634 S. BLAKE ST., CHICAGO 9, ILL.

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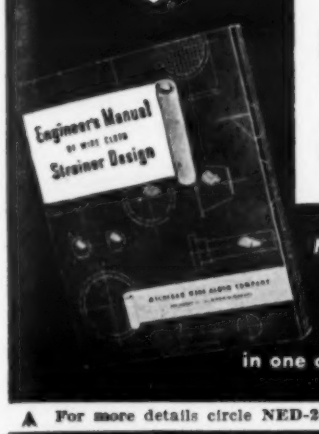
How To Design Your WIRE CLOTH STRAINER

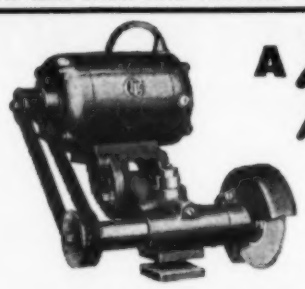


This new ENGINEER'S MANUAL takes you on a step-by-step course of designing wire cloth strainers to meet your own special requirements. Discusses weaves, meshes, metals, shape and construction, flow rate, fabrication processes. Write today for your free copy.

MICHIGAN WIRE CLOTH CO.
2095 Howard Street
Detroit 16, Michigan

MICHIGAN
Draws the Wire
Weaves the Cloth
Fabricates the Part
in one continuous production line

For more details circle NED-2062 on enclosed inquiry slip



A "Must" FOR EVERY LATHE

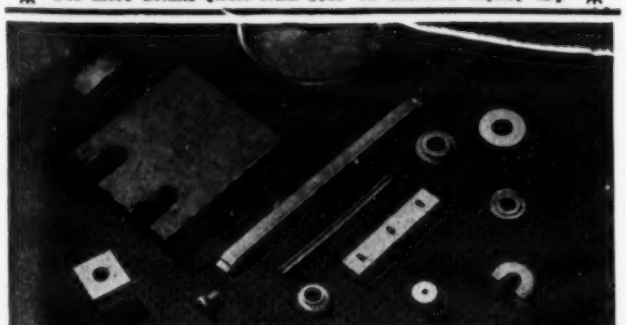
Mount THE CINCINNATI Ball Bearing Tool Post Grinder on the compound rest of any lathe with a 9" swing, or larger, and you're ready for fast, convenient grinding of lathe centers, cutters, reamers, rolls and dies.

THE CINCINNATI will grind work within 2½" of the maximum lathe swing . . . it can be swivelled around the clamping bolt . . . spindle height is readily changed. Adjustable motor mount makes it easy to maintain proper belt tension. Send today for Bulletin 52-RD with detailed information.

Manufacturers of a complete line of ELECTRIC DRILLS, GRINDERS, BUFFERS, PORTABLE TOOLS, AIR MASTER DUST COLLECTORS.

TRADE The Cincinnati MARK
THE CINCINNATI ELECTRICAL TOOL CO.
Division of THE R. K. LeBLOND MACHINE TOOL CO.
CINCINNATI 8, OHIO, U. S. A.

For more details circle NED-2063 on enclosed inquiry slip



Here's the answer to a better product!

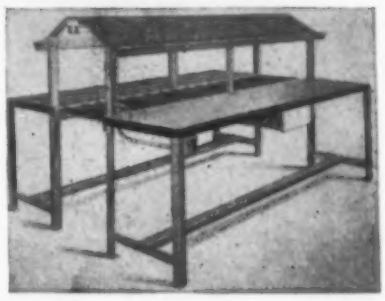
If your product consists of parts that call for unusual physical, electrical and mechanical properties or a *combination* thereof, then you'll find no material more versatile than Taylor Vulcanized Fibre. It's twice as light as aluminum . . . exceptionally tough and resilient. It possesses great mechanical and high dielectric strength...has good forming qualities. Solvents won't affect it and it's attractive in appearance. Taylor Vulcanized Fibre is available in sheets, rods, rolls and coils in 7 job-proved grades. Want more information? Write today for complete engineering data. Ask, too, about Taylor Phenol, Melamine and Silicone Laminates . . . and our modern fabricating facilities.

SINCE 1901 Taylor LAMINATED PLASTICS

TAYLOR FIBRE CO.
NORRISTOWN, PA. • LA VERNE, CALIF.
VULCANIZED FIBRE • • • PHENOL • MELAMINE • SILICONE LAMINATES

For more details circle NED-2064 on enclosed inquiry slip

CONVEYOR-INSPECTION TABLE has lights and power outlet

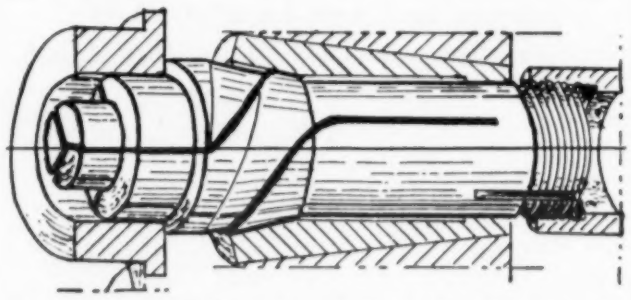


Equipped with roller conveyor section, parts inspection table facilitates checking and assembling operations. Two tables are separated by conveyor. Fluorescent lights illunate both tables and are shielded from workers' eyes. Canopy serves as shelf for rejected parts, tools, drawings, etc. Each table has two electric outlets and drawer for tools and instruments. Units can be set up end-to-end to obtain any desired length. Tables are plywood, reinforced with 2-in. planks and covered with battleship linoleum. Made by **Samuel Olson Mfg. Co.**, 2423 Bloomingdale Ave., Chicago 47, Ill.

For more details circle NED-2065 on enclosed inquiry slip

SLOTTED MANDREL expands like collet to grip work

Holding of work pieces during machining operations is simplified with one piece Colletmandrels which are slotted to form three cantilever sections that deflect outward



to engage and hold work. Each mandrel has one, two or three gripping diameters and is made in standard C-5 collet sizes. Diameters range from 7/32 to 1½ in. increasing in increments of 1/32-in. As tapered part is tightened in machine, spiral segment is forced to deflect outward. With 10-degree taper, total radial force exerted by each of three gripping shoulders is about equal to axial force on mandrel. Made by **E. Westberg Corp.**, 800 Beley Ave. cor. Westwood, Syracuse 11, N. Y.

For more details circle NED-2066 on enclosed inquiry slip

DO YOU KNOW? Microwave radio stations for pipeline and power utilities utilize only 1 per cent of the critical copper required to provide similar service with conventional telephone wires. In addition to voice communications, signals can be sent over microwave systems to start and stop engines, read meters, open and close valves, control pressures and other operations. Two types of microwave systems are available. One operates in the 2000-megacycle band and can provide up to 24 voice channels. The other is 960 megacycles for one or two voice channels. Each voice channel can be used as 18 separate channels for carrying electronic tones which perform remote control operations. Full information is available from General Electric Co., Electronics Park, Syracuse, N. Y.

For more details circle NED-2067 on enclosed inquiry slip

FINISHING PROBLEM?

Switch to Black & Decker POWER!

B & D SANDERS
3 models, 7" and 9" disc diam., standard and heavy-duty types.

B & D ELECTRIC SANDERS drive abrasive discs, saucer grinding wheels, "Whirlwind" wire cup brushes, planing and gouging heads—to speed up sanding metal and wood; grinding down welds and casting ridges; cleaning castings, tanks, vats, sheet metal and soldered joints; surfacing timbers. B&D-built universal motors for dependable service. Match-lapped, spline-mounted spiral bevel gears for smooth, quiet flow of power. Perfect balance for easier handling. See your nearby B&D Distributor for a demonstration. Write for free catalog to: THE BLACK & DECKER MFG. CO., 615 Pennsylvania Ave., Towson 4, Md.

LEADING DISTRIBUTORS EVERYWHERE SELL
Black & Decker PORTABLE ELECTRIC TOOLS

For more details circle NED-2068 on enclosed inquiry slip

Compact

STANDARDIZED, RIGHT-ANGLE, BEVEL GEAR *DRIVE UNITS* WITH UNIVERSAL MOUNTINGS

ANGLgears are used wherever precision, high capacity and long life are required. Both basic models are designed for manual or power operated systems. Model R-300 has rating of 1/3 hp at 1,800 rpm, Model R-320, 1 hp at the same speed. ANGLgears are available with 2 or 3-way drive, are lubricated for life, have hardened gears, and antifriction bearings. They also feature 3-bolt side and flanged end mountings with internal pilots. Write for descriptive literature.

SOLD THROUGH LEADING INDUSTRIAL DISTRIBUTORS THE COUNTRY OVER

AIRBORNE ACCESSORIES CORPORATION
1414 Chestnut Avenue, Hillside 5, New Jersey
© A.A.C.

For more details circle NED-2069 on enclosed inquiry slip

. . . for micrometer-precision speed control

HANNA Flo-Set SPEED CONTROL VALVES

½"

If you want *precision* speed control, measured by a consistent, constant gauge, Hanna now offers a new line of Flo-Set Valves ¼", ⅜" and ½" for exacting speed control of low pressure cylinders. Micrometer graduations are in hundredths of a revolution, with each hundredth representing 1/100 of the pipe area to permit precision regulation of flow. For light piping and tubing, there's a ¼" Flo-Set Jr. Valve, which operates the same as the larger units but does not include the micrometer markings.

Hanna Flo-Set Valves are suitable for air, oil or water control, with maximum pressure to 250° p.s.i. and maximum temperature to 250° F. They may be mounted in any position.

Details and specifications are included in a new bulletin —be sure to send for it.

¼" Jr.

¼"

Valves shown are approximately ¾ actual size

Write for New Bulletin and Catalog

For full information on Hanna Flo-Set Valves ask for Bulletin 253. You'll also want a copy of new Hanna Valve Catalog No. 254 showing the complete line of Hanna Valves.

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT . . . CYLINDERS . . . VALVES . . . RIVETERS
1759 Elston Avenue, Chicago 22, Illinois

For more details circle NED-2070 on enclosed inquiry slip

It's New!

- it's different
- it's an "all-use" vinyl primer
- it virtually eliminates surface preparation
- it brushes easily — sprays beautifully
- it dries hard in minutes
- it provides excellent adhesion
- it goes under any type finish

it's TYGORUST

use it on wet or dry rusted steel, on wood, on concrete, on previously painted surfaces.

U. S. STONEWARE
Akron 9, Ohio 336c

WRITE RIGHT NOW FOR DETAILS!

For more details circle NED-2071 on enclosed inquiry slip

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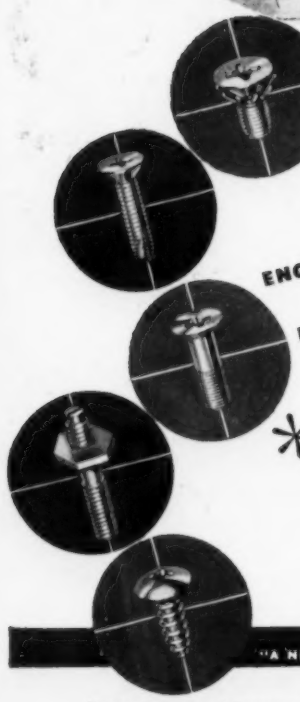
helps you raise your sights on fastener supply!*



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ENGINEERING EXPERIENCE
SPECIAL TOOLING SKILLS
PRODUCTION FACILITIES
CONTINUOUS INVENTORY

* Be sure you get the maximum in close tolerances, structural design and prompt high-volume supply. Camcar guarantees this quality through Special Tooling Methods and Selective Machine Control.

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A.N. SCREWS — BOLTS
THREAD CUTTERS
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PHILLIPS HEAD
SEMS

Write for Your Copy of "A NEW STANDARD IN FASTENER SUPPLY"

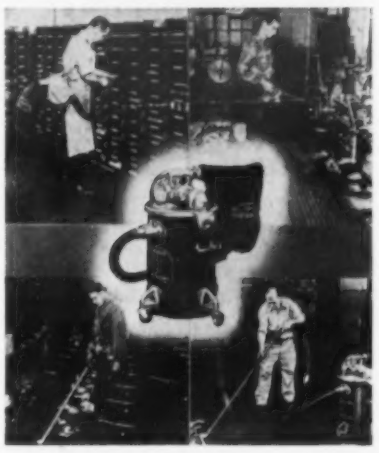
When You Need Fasteners or Special Metal Parts... TELEPHONE 3-9451 or TELETYPE RK-53

CAMCAR SCREW & MFG. CORP.
601 EIGHTEENTH AVE., ROCKFORD, ILL.

"PRODUCTION-DESIGNED FOR YOUR ASSEMBLY LINE"

For more details circle NED-2072 on enclosed inquiry slip

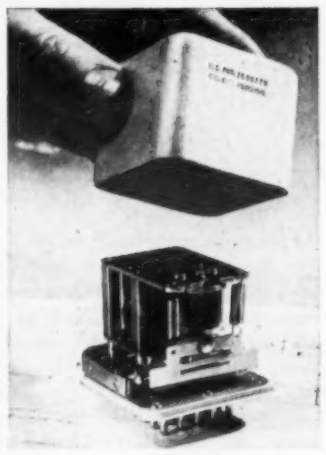
VACUUM CLEANER-BLOWER serves as mobile or portable unit



Tornado model 92 industrial vacuum cleaner can function as hand-carried blower-cleaner, portable hand vacuum cleaner, portable air-sweeper, or, with all units attached, as universal suction cleaner for plant and offices. Complete motor and fan housing is removable for portable use. Air-cooled 1⅓-hp universal motor operating at speed of 13,000 rpm creates suction of over 230 cfm, sufficient to pick up water, metal chips, sweeping compound, machining coolant and oil. Twelve gallon capacity tank and heavy exterior bag for dust are part of unit which weighs 50 lb. Made by **Breuer Electric Mfg. Co.**, 5106A N. Ravenswood Ave., Chicago 40, Ill.

For more details circle NED-2073 on enclosed inquiry slip

ELECTRIC-CIRCUIT CONTROLLER plug-in unit can be utilized in voltage, current, speed regulation



Low-power-level electrical signals can be converted into control signals of much higher power level with Regohm size 3 universal electric-circuit controller. Compact plug-in unit can be utilized in voltage, current or speed regulation and can be adapted to rotating machinery, line and load regulation, rectification, battery charging, servo mechanisms, saturable reactors and close differential relays. It can be built with 20 standard fingers of 1 amp, 12 w capacity, or 10 extra heavy fingers of 3-amp capacity.

Minimum of 1.5 w is required for coil current which is available in impedance varying from 0.01 to 10,000 ohms. Unit operates on direct current or 50 to 60 cycle ac, while built-in rectifier can be provided for operation on other frequencies. Approved by many Government specifications, controller measures 2 x 2 x 2 in. and can be hermetically sealed. Made by **Electric Regulator Corp.**, Dept. N, South Norwalk, Conn.

For more details circle NED-2074 on enclosed inquiry slip

DO YOU KNOW? The Fourth International Lighting Exposition and Conference will be held in the Public Hall, Cleveland on May 6 to 9, 1952. Advance registration tickets are now available. For more information, contact B. F. Stevens, Public Relations Counsel, Room 818, 326 W. Madison St., Chicago 6, Ill.

Solve Your Glove Problems Boost Production

PIONEER **Stanzoils®**

R-28 Hot 'n Cold Glove, twin lined insulating, 12" gauntlet, red DuPont neoprene. Comfort in extremes from −85° to +314°F.

Your choice of the right glove for each job can mean faster work, more production, better protection for your workers *and* lowest per hour glove cost. No one glove is right for every job! PIONEER's new Stanzoil catalog shows you how to choose the right glove for each job. *Unbiased advice — Stanzoils include all kinds of liquidtight gloves:* all-neoprene, neoprene, and vinyl-coated. 32 styles, weights, sizes. It pays you to select gloves scientifically. Write for your Stanzoil catalog today.

Industrial Products Division

The PIONEER Rubber Company
634 Tiffin Road • Willard, Ohio

STANZOIL PIONEER

OVER 30 Years OF QUALITY GLOVE MAKING

For more details circle NED-2075 on enclosed inquiry slip

Sheehan's HEAVY-DUTY TWO-PLANE FORGING CONVEYORS are Better!

SOLVES MANY FORGE CONVEYING PROBLEMS

Write today for literature on sizes, special applications and cost data. You will be surprised at Sheehan's high quality and low prices.

Companion to the nationally-known Sheehan Press Conveyors. This Model B Forging Conveyor is equipped with a special high carbon Steel Woven-Mesh Belt, capable of conveying hot or cold forgings weighing up to 25 pounds with ease. Top of belt can be lowered down within 11 inches of floor to fit under hot or cold trim presses or in front of drop hammers and upsetters . . . saving working space and need for cumbersome chutes. Positive drive spike-studded pulley on head-end assures no belt slippage due to heat expansion while conveying hot forgings. Double strength construction throughout to withstand continuous heavy loads and excessive heat. Open bottom for cooling forgings.

The Two-Plane Model B or the Straight Model S are available in various sizes. Investigate the many construction and safety features that make Sheehan Forge and Press Conveyors outstanding in performance and economy!

SHEEHAN'S FORGING CONVEYORS ARE DIFFERENT . . .

Investigate Today!

R. T. SHEEHAN CO. PLYMOUTH, MICH.

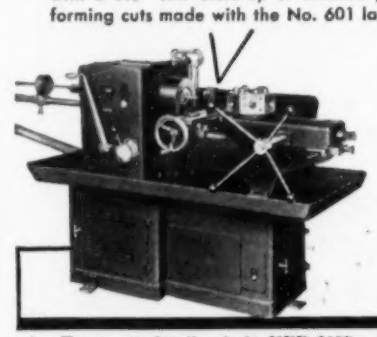
For more details circle NED-2076 on enclosed inquiry slip

HEAVY CUTS

OSTER

No. 601 "RAPIDUCTION" the SIMPLIFIED LATHE

View shows this lathe removing a .007" chip on S.A.E. 1335 steel with a 3⅛" cut. Close-up of finished part is example of heavy forming cuts made with the No. 601 lathe. *It's EASY to operate!*



Capacity: 1½" round bar. Optional features include WORM drive or DIRECT drive: 2-speed or 4-speed motor; other optional features. Write for Bulletin No. 601.

THE OSTER MFG. CO.
2066 EAST 61st STREET
CLEVELAND 3, OHIO

For more details circle NED-2077 on enclosed inquiry slip

"YANKEE" offset kit No. 3600-9 Drives

Hollow head set screws and socket head cap screws

Popular "Yankee" Offset Ratchet Handle No. 3600 with eight hex key adapters from $\frac{5}{64}$" to $\frac{5}{16}$". Packed in transparent plastic case. Strong "Yankee" ratchet drives or draws 21 sizes of hollow set screws and socket head cap screws, even in extremely close quarters. Ask for No. 3600-9 "Yankee" Offset Kit. Additional adapters available for slotted screws and Phillips recessed head screws. Other "Yankee" Offset Screw Drivers you'll find useful are—Nos. 3400 and 3800 for slotted screws; Nos. 3412 and 3423 for Phillips recessed head screws. Available from your distributor. For circular, write North Bros. Mfg. Co., 205 West Lehigh Ave., Philadelphia 33, Pa.

"YANKEE" TOOLS NOW PART OF STANLEY THE TOOL BOX OF THE WORLD

NORTH BROS. MFG. CO. • PHILADELPHIA 33, PA.

For more details circle NED-2078 on enclosed inquiry slip

LONGER WORK WEEK? OVERTIME? MORE WORKERS?

Get MORE PRODUCTION PER HOUR FROM EACH WORKER!

Save Up to 50% In Production Time

Increase Man-Hour Output

Combine Work Operations

BURR • FINISH • CLEAN • POLISH In One Time-Saving Operation

Use nationally known BRIGHTBOY; does many jobs better and faster because of the unique action of the combination rubber and abrasive composition.

HOW BRIGHTBOY SAVES PRODUCTION TIME

1. Bridges the gap between the rough grind and the buff.
2. Works to close tolerances; can be shaped to contour.
3. Produces a wide variety of conventional and special finishes and patterns; frequently the final polish.
4. Requires no before-use preparation or dressing; no skilled labor to handle it.

SOME BRIGHTBOY USES: Removing light digs, tool and heat marks • Cleaning welded and soldered joints • Finishing dies and molds • Burring stampings, castings, machined parts.

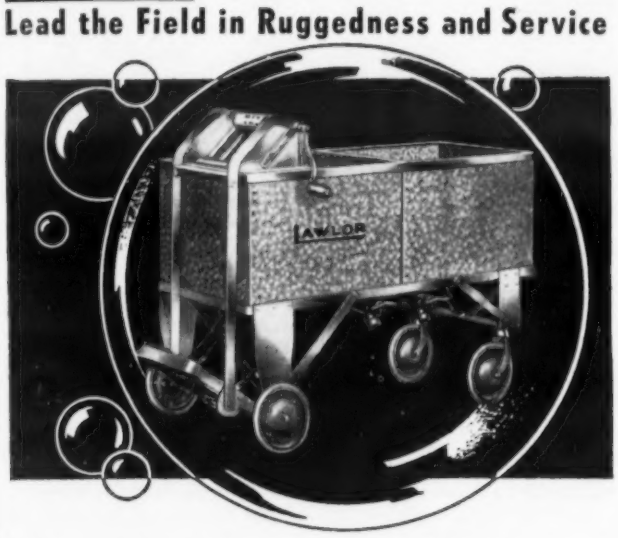
Ask your dealer about Brightboy. Write us for Catalog-Manual, and on any problem where abrasive finishing methods or production are involved.

BRIGHTBOY INDUSTRIAL DIVISION
Weldon Roberts Rubber Co.
Newark 7, N. J.

WELDON ROBERTS
Brightboy
REG. U.S. PAT. OFF.
America's Pioneer Manufacturers of Rubber-Bonded Abrasives

▲ For more details circle NED-2079 on enclosed inquiry slip ▲

LAWLOR MOPPING TANKS
Lead the Field in Ruggedness and Service



8 styles and sizes of all steel, acetylene welded tanks • 2 or 3 compartments • 30, 60 or 65 gallon capacities • hand or foot pressure wringers • perforated roll wringers • special drain shut-offs • hot dipped, galvanized chassis and frames • rubber tired, cadmium plated steel wheels.

Write for Catalog of Mopping Tanks, Wringers, Floor Scrub Wax-Polishing Machines for every kind and size floor.

S. C. LAWLOR CO.
Quality Floor Equipment for 50 Years
131 N. Aberdeen St., Chicago 7, Ill.
See our Exhibit, N.S.S.A. Convention, Booth 159, Hilton Hotel, Chicago, March 23-26

▲ For more details circle NED-2080 on enclosed inquiry slip ▲

For AIR or GAS at constant pressure

Billmyre BLOWERS and EXHAUSTERS

Centrifugal Type . . . Single and Multi-Stage . . . ½ lb. to 7 lbs. pressure . . . ½ h.p. to 500 h.p.

Constant pressure maintained through entire capacity range. External bearings — no internal lubrication required. Hence, air delivered clean and dry.

Our engineering staff will help with problems in handling air or gases of various densities, temperatures or chemical compositions. Write or phone.

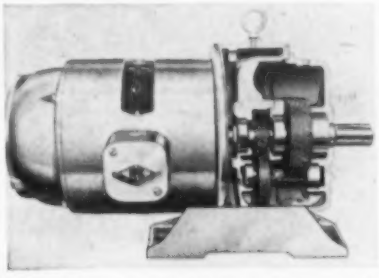
LAMSON

Send for Bulletin B-5 — gives descriptions, applications, specifications. Lamson Corporation, Billmyre Blower Division, 503 Lamson Street, Syracuse 1, N. Y.

CONVEYORS PNEUMATIC TUBES PALLET LOADERS BLOWERS

▲ For more details circle NED-2081 on enclosed inquiry slip ▲

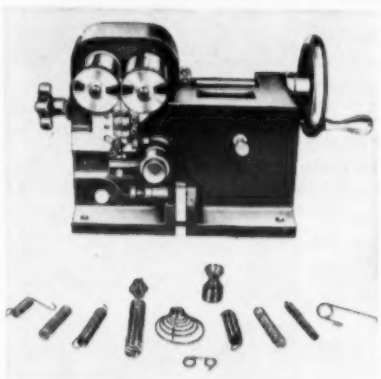
GEAR REDUCER with internal fluid coupling



Cushioned starting of heavy loads and protection against jamming of equipment are provided by gear reducer with internal fluid coupling. Unit consists of standard Reuland Fluid-Shaft motor and gear train in single compact housing. Motor's high speed is converted into slow speed, high torque output. Application can be in cranes, conveyors, dryers, mixers, car puller and other machinery requiring smooth acceleration at reduced motor speeds. With power take-off shaft, gears and bearings located adjacent to vertical centerline of pyramidal base, load pull is transmitted directly to base with minimum of lateral stress. All gears operate in an oil bath. Units are available in drip-proof or totally enclosed designs with output speeds from 1 to 600 rpm. Made by **Reuland Electric Co.**, Mission & Fremont, Alhambra, Calif.

▲ For more details circle NED-2082 on enclosed inquiry slip ▲

PRECISION SPRING COILER makes torsion, compression, tapered and extension springs automatically



It is unnecessary to change arbors in this Perkins precision spring coiler when producing either right or left hand torsion, compression, extension and tapered springs. Wire stock ranging in diameter from 0.005 to 0.125-in. can be handled. Springs can be made with or without initial tension and with open or closed ends. When individual springs are required for replacements, prototypes or experimental work, they can be turned out in a few minutes.

As wire is fed, adjustable coiling point deflects it into coiled spring. Diameter is selected by fixed setting of coiling point, and tapered or conical springs are produced by adjusting the outside diameter screw as required to create a larger or smaller diameter. Second knurled adjusting screw permits selection of any desired pitch or lead in spring as it is being coiled. Pitch can be held constant or varied as spring is made. Separate tool forms loops or hooks on ends of spring.

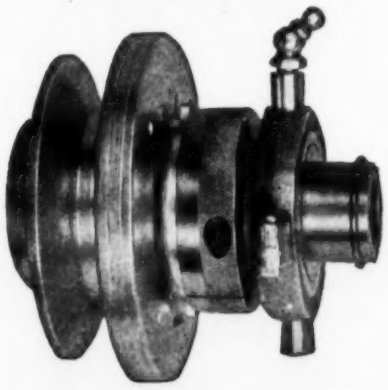
Machine is supplied complete with three wire guides, three wire feed rolls and two coiling points. Illustrated manually operated model equipped to handle full range of wire sizes has list price of $320. Power model is also available, mounted on welded steel cabinet base. It is designed for continuous runs and for handling heavy wires more easily. Sensitive foot brake control disengages ¼-hp motor for hand operation. Distributed by **Connors & Davis Sales Corp.**, Circuit Ave. & Clark St., West Springfield, Mass.

▲ For more details circle NED-2083 on enclosed inquiry slip ▲

NEW DISC CLUTCH

for gasoline engines, electric motors, speed reducers, etc.

operates with light pressure
picks up load without grab



integral V-belt pulley
integral sprocket
cut-off coupling or sleeve
easy manual operation
adjustable
powerful

For stub or through shaft application, these new Type K clutches—rated up to .8 HP at 100 rpm—have generous safety factors throughout to stand severest service. Threaded steel adjuster permits precise easy adjustments to assure maximum capacity and minimum engaging pressure. Clutch locks itself in engaged position.

Write for new descriptive Bulletin K-1, including complete specifications.

THE EDGEMONT MACHINE CO.
2200 HOME AVENUE • DAYTON 1, OHIO

▲ For more details circle NED-2084 on enclosed inquiry slip ▲

YOU CAN'T SCRATCH A DYNAPAKT FLOOR!

Ordinary concrete floors, easily scraped with a nail or a coin, wear off rapidly under the continuous grind of heavily-loaded traffic.

But DYNAPAKT Floors are so dense and so hard that they are merely burnished by the same treatment.

Write for your copy of "TRAFFIC CONCRETE — A study in specialization."

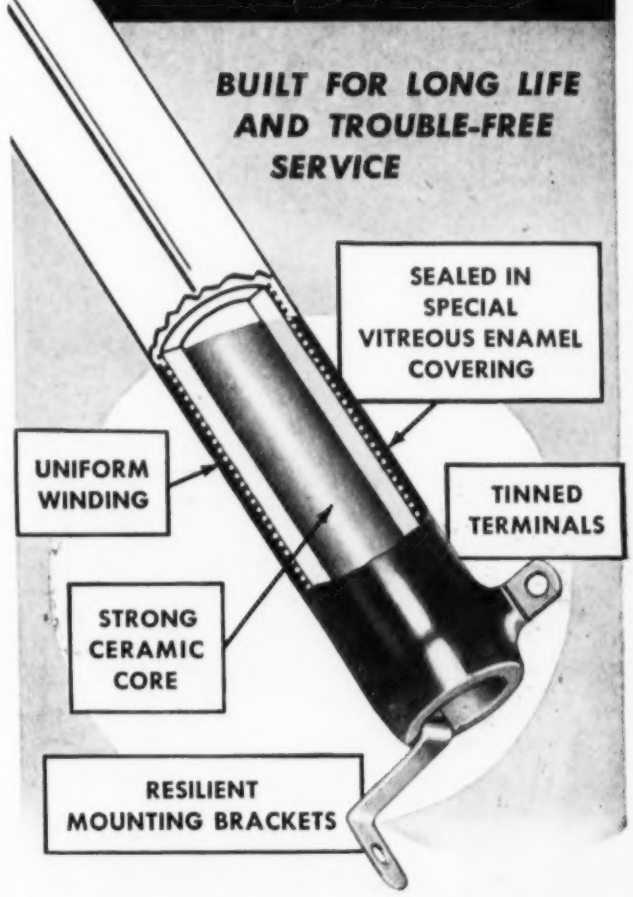
FLASH-STONE COMPANY
INCORPORATED
3723 pulaski avenue, philadelphia 40, pa.

industrial flooring specialists

▲ For more details circle NED-2085 on enclosed inquiry slip ▲

OHMITE WIRE-WOUND RESISTORS

BUILT FOR LONG LIFE AND TROUBLE-FREE SERVICE



Ohmite wire-wound resistors are ruggedly constructed to withstand shock, heat, fumes, and humidity. A sturdy ceramic core provides a strong base for the resistance wire, which is wound with an unsurpassed uniformity to prevent "hot spots." This winding is held rigidly in place and protected by a special vitreous enamel coating. Terminal lugs are tin-dipped for ease in soldering, and windings are brazed or welded to the lugs to assure perfect connection. Ohmite resistors are available in a wide range of types and resistance values, in ratings from 5 to 200 watts.

Write on company letterhead for Engineering Catalog No. 40

OHMITE MANUFACTURING CO.
4842 Flournoy St., Chicago 44, Ill.

Be Right with OHMITE®
RHEOSTATS • RESISTORS • TAP SWITCHES

▲ For more details circle NED-2086 on enclosed inquiry slip ▲

the SAF-I-SHIELD SAFETY GOGGLE

often copied... never excelled

- Comfortable
- Strong—Rugged
- Fits Over Personal Glasses
- Made of Optilite
- Optically Correct
- Low Cost

WRITE FOR LITERATURE AND PRICES

UNITED STATES SAFETY SERVICE CO.
KANSAS CITY 6, MISSOURI BRANCHES IN PRINCIPAL INDUSTRIAL CITIES
In Canada PARMELEE, LTD. Toronto

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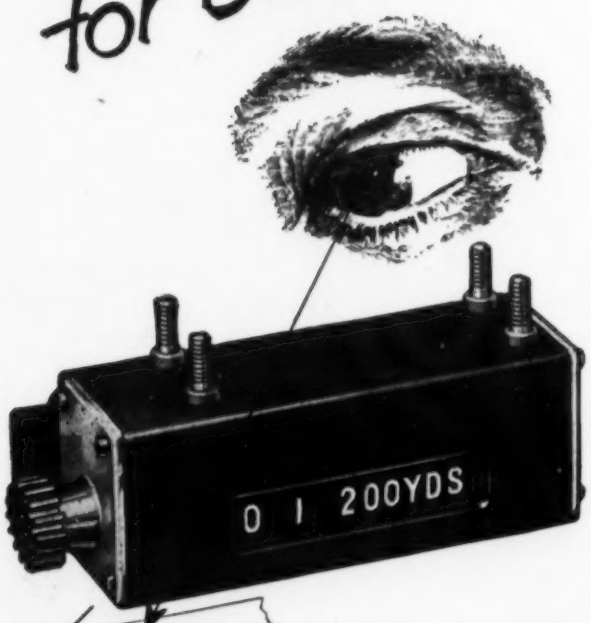
It has a "Mathematical Eye" for Distance



Added Evidence that

Everyone Can Count on VEEDER-ROOT

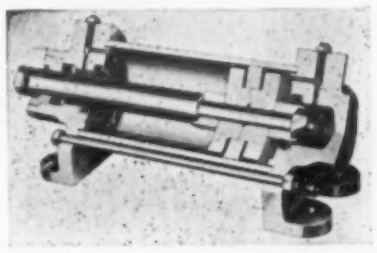
Here's still another good soldier, on a highly special assignment. With contact assembly, it counts miles and yards, when used in conjunction with other equipment. And it also makes contacts on *predetermined* readings . . . *direct* readings that need no translation.

Now, as the counting process comes to be counted as more and more indispensable to all types of defense materiel, what might we do...*especially for you?* Just say when you'd like to get together...*and start figuring.*

VEEDER-ROOT INCORPORATED
HARTFORD 2, CONN.

▲ For more details circle NED-2088 on enclosed inquiry slip ▲

AIR CYLINDER features flexible cushion sealing



Positive cushion action combined with automatic valving action for fast return stroke is provided by flexible seal incorporated in T-J Super Cushion air cylinders. Seal automatically compensates for wear, but will not bind or stick. Cylinder also employs packing nut incorporating a piloted diameter for accurate alignment. Female adaptor feature is integral part of packing nut. Metallic male adaptor ring used in piston rod stuffing box gives added support to chevron type packing, and metallic rod wiper ring affords protection from dirt and grit. Available in seven standard styles for all types of mounting requirements, cylinder is safety-stressed for air line pressures up to 100 psi. Capacities range from 100 to 12,000 lb for power movement in either direction. Made by **Tomkins-Johnson Co.**, 609 N. Mechanic St., Jackson, Mich.

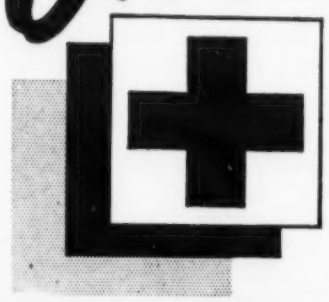
▲ For more details circle NED-2089 on enclosed inquiry slip ▲

LOAD BINDERS for constant, uniform tension

Compensating action imparted by spring is principle which assures constant and uniform tension on load in series of load binders. Breakage of chain and hooks is virtually eliminated and tension remains the same under all conditions. Continuous action take-up in handle is an additional safety factor. Four models available have capacities starting at 9000 lb. Made by **Canton Cast Products Co.**, 2460 Thirteenth St. N. E., Canton 5, O.

▲ For more details circle NED-2090 on enclosed inquiry slip ▲

Give!



NEW LOW COST VOLUME PRODUCTION

Complete, Full-Size Ammonia-Type

VERSA-LINER WHITEPRINTER $1295

Model D

● Economically prints and develops black line and colored line whiteprints. Uses dry ammonia-fume diazo method. Plugs into standard 115 V 60 cycle AC line, using 19 amps. Easy to install and operate. Handles cut sheets or roll stock up to 42" wide in any length. Variable printing speed to 5 ft. per min. Developing speed set at 6 ft. per min. New light source—low replacement cost. Easy to clean. Minimum maintenance. *Get full facts now!*
Also Model M Versa-Liner for moist diazo process *(no fumes)* at $1095.00 list. Spee-Dee Sheet Printers up to 24" x 36" from $55.12 to $149.81.

PECK & HARVEY 5733 N. WESTERN AVE. CHICAGO 45, ILLINOIS
MFRS. OF WHITEPRINT, BLUEPRINT AND PHOTOCOPY EQUIPMENT

▲ For more details circle NED-2091 on enclosed inquiry slip ▲

IF YOU WALK ON IT IT CALLS FOR OPEN STEEL FLOORING

Satisfies every Industrial Demand
- STRENGTH
- SAFETY
- LIGHT
- VENTILATION

Open Steel Flooring is durable steel grating that can be walked on, worked on, and that takes wear and tear of vehicle wheels . . . yet it is of open, light-weight construction to provide maximum light, air and cleanliness. Low erection costs and almost non-existent maintenance make it truly economical. And, its great versatility makes Open Steel Flooring easily adaptable to any factory or plant application—indoors or outdoors.

OPEN STEEL FLOORING INSTITUTE, INC.
2311-7 First National Bank Building
Pittsburgh 22, Pa.

This insignia identifies member companies of the Open Steel Flooring Institute—all of whom meet its rigid specifications which assure quality engineered open steel flooring.

Send for a FREE copy of this new informative IDEA BOOK on the uses of Open Steel Flooring.

▲ For more details circle NED-2092 on enclosed inquiry slip ▲

Quality starts with a Superior Finish

The finish on your product reflects the craftsmanship, the quality of that item. That's why so many metal fabricators specify Haskins Flexible Shaft Machines for all their polishing, sanding, grinding, buffing, and filing operations. Like this manufacturer of stainless steel sinks, they have found that Haskins power and the right attachment provide precision operation that assures quality production.

Because you handle only a light handpiece—not a heavy motor—you find that operator fatigue is reduced, production goes up. And multi-speed power allows selection of the right speed for varied operations.

You'll find the right combination of power, speed and attachments for your specific application in the complete Haskins line. Write today and ask for our recommendation on your grinding, sanding, filing or polishing job—no obligation, of course. R. G. Haskins Co., 603 Washtenaw, Chicago 12, Ill.

haskins
FLEXIBLE SHAFT EQUIPMENT

Your choice of mounting: Bench, Pedestal or Suspended

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TUBE BENDER

BEND-EX AIR COMPRESSION TUBULAR BENDING MACHINE

Makes Over 900 bends an hour

Adaptable to All bending . . .
round, square, rectangular — pipe, light angles, channels, solid bars, etc.

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CHICAGO 32, ILLINOIS

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	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900
	2001	2051	2101	2151	2201	2251	2301	2351	2401	2451	2501	2551	2601	2651	2701	2751	2801	2851	2901
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1964	2014	2064	2114	2164	2214	2264	2314	2364	2414	2464	2514	2564	2614	2664	2714	2764	2814	2864	2914
1965	2015	2065	2115	2165	2215	2265	2315	2365	2415	2465	2515	2565	2615	2665	2715	2765	2815	2865	2915
1966	2016	2066	2116	2166	2216	2266	2316	2366	2416	2466	2516	2566	2616	2666	2716	2766	2816	2866	2916
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1970	2020	2070	2120	2170	2220	2270	2320	2370	2420	2470	2520	2570	2620	2670	2720	2770	2820	2870	2920
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1995	2045	2095	2145	2195	2245	2295	2345	2395	2445	2495	2545	2595	2645	2695	2745	2795	2845	2895	2945
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1999	2049	2099	2149	2199	2249	2299	2349	2399	2449	2499	2549	2599	2649	2699	2749	2799	2849	2899	2949

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32

NAME ..... TITLE .....

COMPANY ..... Approx. Number of Employees .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

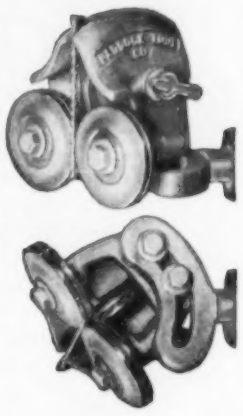
Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
- ☐ Under $75,000

MORE SPEED MORE SUPPORT

PADDOCK BALL-BEARING BAND-SAW GUIDES

Model 20, as pictured, enables a machine to cut material to any width with guides quickly adjusted to hold blade at 45°. The lower picture shows angular adjustment.



Interchangeable ball-bearing wheels run with saw-blade and support working portion of blade as if in a frame. Guides come in several sizes. Write, giving size of machines and material being cut. We will gladly provide information, make recommendations, and quote prices.

PADDOCK TOOL CO.
Guide Makers Since 1920
1418 Walnut St. Kansas City, Mo.

Paddock BALL-BEARING BAND SAW GUIDES

MERRILL MATERIALS HANDLING DEVICES

3-M-2

MERRILL BROTHERS
56-13 ARNOLD AVENUE MASPETH, N. Y.

For more details circle NED-2095 on enclosed inquiry slip

New! Resistance Limit Bridge

Direct-Reading in Percentage Deviation Over Range of ±20% from 1 Ohm to 1,111,111 Ohms

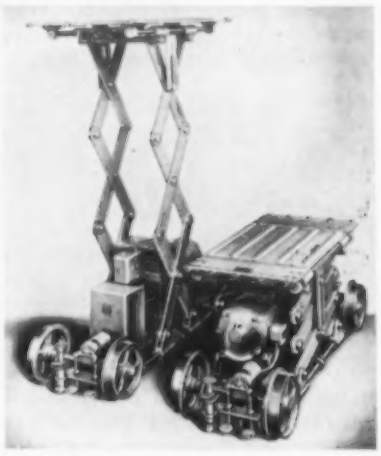
Uses a conventional equal-arm Wheatstone bridge circuit, supplied from a constant d-c source. Its accuracy is adequate for a large majority of resistance measurements. Its ability to measure resistances up to one megohm without added booster voltages increases its utility considerably. The indicating meter shows percentage difference between the unknown and the adjustable standard. A sensitive relay can be substituted for the meter to operate various types of rejection or selection mechanisms for automatic sorting or inspecting.

Type 1652-AM Resistance Limit Bridge (Cabinet Model) $365
Type 1652-AR Resistance Limit Bridge (Relay Rack Model) . . $365

GENERAL RADIO Company 275 Massachusetts Ave. Cambridge 39, Mass.
90 West St. NEW YORK 6 920 South Michigan Ave. CHICAGO 5
1000 North Seward St. LOS ANGELES 38

For more details circle NED-2096 on enclosed inquiry slip

TRACK SYSTEM ELEVATORS
move manually, elevate electrically



Designed and built for in-work material handling problems encountered in process and machining operations, these Portelvators operate on track which skirts storage shelves and processing stations. Units are moved manually from station to station, but elevate electrically from 24 to 64 in. above floor level. Table measures 24 x 36 in. and can lift up to 600 lb at rate of 40 in. per minute. Scissor type lift mechanism is powered by 1-hp elevator type motor through standard worm, worm gear and screw power transmission. Motor is actuated through foot control from either end of table. Electrical controls include gear driven limit switch and reversing magnetic starter. Made by **Hamilton Tool Co.**, 901 Hanover, Hamilton, O.

For more details circle NED-2890 on enclosed inquiry slip

INSULATING MICA SHEET
produced in various thicknesses

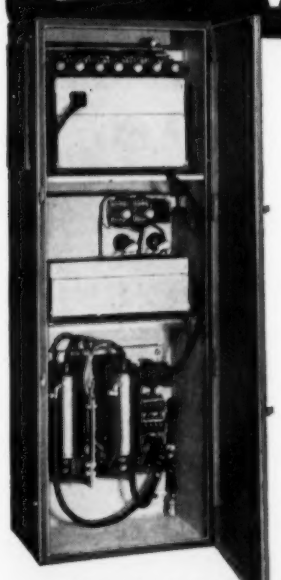
Minute mica flakes are so treated that a force is generated to hold the tiny particles in producing G-E micamat. This electrical insulating material is in form of continuous sheet and is available in thicknesses ranging from 0.002 to 0.006-in. It is reported to have better dielectric strength than present machine and hand laid mica products. It can be impregnated with resins and bonded to paper, glass and cloth for greater strength and improved electrical properties. Tapes and sheets can be used in heating devices, molded into shapes for motors and generators, or machine wrapped on bars and cables. Commercial production of this insulating material is planned for the first quarter of 1952 by **General Electric Co.**, Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

For more details circle NED-2891 on enclosed inquiry slip

DO YOU KNOW? Greatly increased life has been imparted to food grinders by using thrust washers stamped from nylon strip. Tests indicate that nylon washers in Dormeyer food choppers show no signs of wear under conditions simulating 10 years of normal operation. Nylon strip is produced by Polymer Corp. of Pennsylvania, 438 Walnut St., Reading, Pa.

For more details circle NED-2892 on enclosed inquiry slip

Simplified Precision Welder Control



- Greatly Simplified Circuits
- Timing Accuracy Assured
- Easy Inspection and Maintenance

APPLICATION: for welding stainless steel, nonferrous metals, and other critical spot welding jobs requiring electronic synchronous-precision control. (Available with current wave shape control auxiliaries for aluminum or alloy metals.)

at left • Class 8993 NEMA Type S2H Synchronous-Precision Controller available with 600 or 1200 frame contactor. Can be arranged either for side of machine or wall mounting.

Write for Bulletin 8993 Square D Company, 4041 North Richards Street, Milwaukee 12, Wisconsin

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY
DETROIT • MILWAUKEE • LOS ANGELES

For more details circle NED-2097 on enclosed inquiry slip

There's No Guesswork When You Use

SYNTRON "Vibrating" TEST SIEVE SHAKERS

—they'll give you fast, efficient sizing of test samples.

- Use standard 8" Screen Scale Testing Sieves.
- A reset timer for accurately timed test periods.
- 110-60 AC Operation.
- Controlled electromagnetic vibration —no motors, pulleys, etc.

Write for Free Descriptive Bulletin

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

For more details circle NED-2098 on enclosed inquiry slip

HALLOWELL "700" STEEL PLATFORM TRUCKS —real factors in economical materials handling

All-steel, heavy-duty, maintenance-free construction and new, functional design which permits better load distribution and easier handling make HALLOWELL "700" Trucks real factors in reducing materials handling costs.

Versatility, too, cuts costs. Light and medium-duty units are easily converted to tilt type trucks. New-style corner sockets facilitate use of various accessories, speed changeover for different jobs. Write for bulletin 718-3.

STANDARD PRESSED STEEL CO.
Jenkintown 24, Pennsylvania

HALLOWELL® MATERIALS HANDLING DIVISION

sps
JENKINTOWN, PENNSYLVANIA

For more details circle NED-2099 on enclosed inquiry slip

WE OFTEN DO THIS—

to deliver Synthane Plastics on time

On-time delivery of Synthane laminated plastics parts and materials is one of our prime principles of service. Sometimes we almost have to stand on our heads to make it, but we do usually deliver the goods for our customers when wanted. If you are not now a customer and need materials or fabricated parts with an unusual combination of valuable properties, find out about Synthane. Mail the coupon today for complete information.

SYNTHANE

Manufacturers of laminated plastics
SHEETS
RODS • TUBES
MOLDED-LAMINATED
MOLDED-MACERATED
FABRICATED PARTS

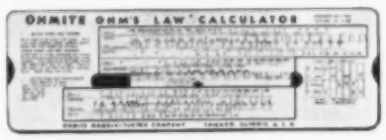
SYNTHANE CORPORATION
Northeast River Road, Oaks, Pa.
Gentlemen:
I'd like to know more about Synthane laminated plastics. Please send your catalog to:
Name_____
Address_____
City_____ Zone____ State_____

For more details circle NED-2100 on enclosed inquiry slip

▲ For more details circle NED-2101 on enclosed inquiry slip ▲

OHM'S LAW CALCULATOR
is pocket-size plastic slide rule

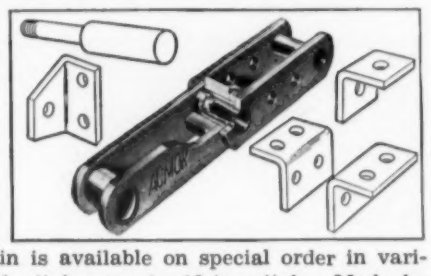
Vinylite plastic Ohm's law calculator provides handy scale for solving electrical resistance problems with only one setting of the slide. There are no decimal points to compute, since all values are read directly over entire range which covers currents, resistances, voltages and wattages commonly encountered in moderate power, industrial and radio work. On back of calculator are provided standard slide rule and direct-reading, one-setting scales for computing parallel resistance. Slide rule has A, B, C and D scales for multiplying, dividing and finding squares and square roots. Price is 25 cents. Made by **Ohmite Mfg. Co.,** 4843 W. Flournoy St., Chicago 44, Ill.



▲ For more details circle NED-2894 on enclosed inquiry slip ▲

CONVEYOR CHAIN
steel roller and bushing types

Available in either a steel roller or bushing type, type HP conveyor chain is made with 2, 2½, 3 and 4-in. pitches. Hollow pin chain is available from stock. Attachments are available for all pitches which are either bolted or welded to chain proper, making it possible to construct an unlimited variety of conveyors from stock units. Chain is available on special order in various strengths and pitches up to 12-in. pitch. Made by **Acmor Conveyor Chain Co.,** 17698 Broadway, Bedford, O.



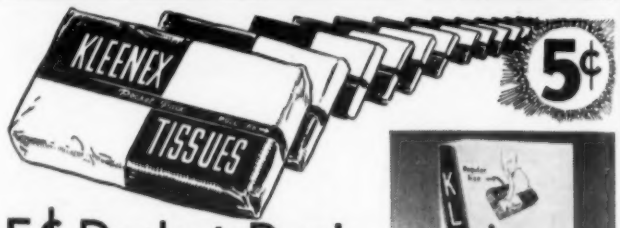
▲ For more details circle NED-2895 on enclosed inquiry slip ▲

HIGH-CURRENT VOLT-AMMETER
snap-around type measures 1200 amp.

Snap-around high current Amprobe volt-ammeter that measures up to 1200 amp takes readings without interrupting circuit or shutting down equipment. Pocket-size instrument incorporates six ammeter ranges, from 0 to 1200 amp, and three volt-meter ranges from 0 to 600 v ac. Voltage test leads have safety-type plug which insulates itself when removed from meter. Probe jaws are insulated down into sockets to minimize danger of shorts while working in crowded switch boxes or panels. Only 8½ in. long and weighing 15½ oz, meter has large d'Arsonval jeweled movement with Alnico magnet. Price of $67.50 includes top grain cowhide leather case and voltage test leads. Made by **Pyramid Instrument Corp.,** Dept. NED, Lynbrook, N. Y.

▲ For more details circle NED-2896 on enclosed inquiry slip ▲

▲ For more details circle NED-2105 on enclosed inquiry slip ▲



5¢ Pocket Pack
NOW AVAILABLE IN YOUR RESTROOMS WITH
VEND-MASTER

This handsome Vend-Master dispenser provides a healthful sanitary service appreciated by both men and women. "Pocket-Pack" contains 24 regular size Kleenex Tissues. Just the thing for pocket or purse. Dispenser may be either mounted on wall or on a pedestal type stand as illustrated.

Here is a convenience that pays its own way. Order your VEND - MASTER TODAY. $49.50 (Pedestal Stand $15.00)

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MANUFACTURED BY
VEND-RITE MFG. CO.
1534 N. Halsted St., Dep't.-K, Chicago 22, Ill.

▲ For more details circle NED-2106 on enclosed inquiry slip ▲

1 Rigid one-piece construction—easy to install.
2 Maximum open area for light and air.
3 Easy to paint—all surfaces accessible.
4 Non-slip Twisted Cross-Bar.
5 Self-cleaning—no sharp corners to clog.

Blaw-Knox Grating Has Them All!

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▲ For more details circle NED-2102 on enclosed inquiry slip ▲

Commander TAPPER

★ Wider Range...1 Tapper Handles #0 to ¾" Taps
★ Automatic Tap Protection

★ Furnished to fit any Drill Press

Commander—"The Tapper That Thinks For Its Operator," has the adjustable full range torque control that instantly stops any tap when it becomes dull, loaded, strikes a hard spot or bottoms in blind hole tapping. Assures maximum tap protection, higher production, even with inexperienced operators.

Your nearby Commander Distributor can give you a demonstration in your own plant. Write for his name and a copy of the NEW Commander Full Line Catalog #851
See us at Booth No. 1238 ASTE Show, Chicago

COMMANDER MFG. CO.
4220 W. Kinzie St. Chicago 24, Ill.
Product of Commander... Builder of Production Tools

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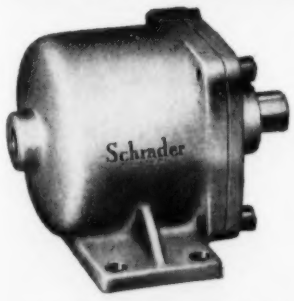
HEATING HIGHLIGHTS by PEE-DEE

Write for P-D Catalog 30-C-43

▲ For more details circle NED-2104 on enclosed inquiry slip ▲

Simplify any work holding operations with ClampAirs



Whether you want a bulldog grip or a gentle one, you'll find the answer in Schrader ClampAir cylinders. ClampAirs eliminate time-consuming hand clamping and rejects caused by an improper holding force.

Write for more information on how the versatile ClampAir can be used in your plant. Full line catalog gives all the data on Schrader ClampAirs as well as other numerous Schrader Air Control Products.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Inc.
459 Vanderbilt Ave., Dept. E-38, Brooklyn 17, N. Y.

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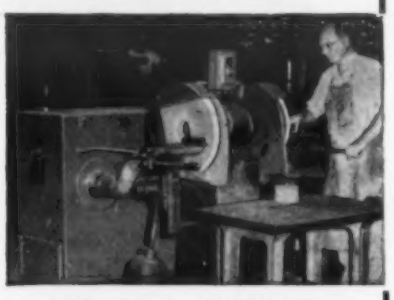
STOP DUST

Instantly with DUSTKOP



DUSTKOP ▶ 1400 cfm

▼ DUSTKOP 3600 cfm

300 cfm to 10,000 cfm per unit (22 models).

Standard, pre-tested, available from stock. Ask for catalog 605-2. Describe dust problem for recommendation by return mail. No obligation.

AGET-DETROIT CO.
201 Main St.
Ann Arbor, Mich.

For more details circle NED-2110 on enclosed inquiry slip

VITROHM Fixed Resistors 5 to 200 watts.

ADJUSTOHM Adjustable Resistors 10 to 200 watts.

STRIPOHM Resistors for use where space is limited.

HOW FAST DO YOU NEED RESISTORS IN YOUR OPERATING PICTURE?

Quick delivery on VITROHM Wire-Wound Resistors can be made to you on stock values and sizes.

While we realize it is not always practical to use a stock size resistor, and that circuit requirements, as well as space limitations, must be considered, we recommend that you explore the possibility of aligning your tubular resistor requirements with our stock sizes, resistance values, watt ratings, and terminal arrangements.

Complete dimensional data on VITROHM Wire-Wound Resistors is given in our catalog.

Write for Bulletin D-130. WARD LEONARD ELECTRIC CO., 51 South Street, Mount Vernon, N. Y. Offices in principal cities of U. S. and Canada.

WARD LEONARD ELECTRIC CO.
Result-Engineered Controls Since 1892
RESISTORS · RHEOSTATS · RELAYS · CONTROL DEVICES

For more details circle NED-2111 on enclosed inquiry slip

EVEREDE CARBIDE TOOL HOLDERS WITH Triangular Shaped SOLID CARBIDE TOOL BITS ...and ON-THE-JOB Adjustable CHIP BREAKERS

STEP-UP PRECISION PRODUCTION

INDIVIDUAL ON-THE-JOB ADJUSTABLE CARBIDE-TIPPED CHIP BREAKERS

permit ON-THE-JOB adjustment of chips . . . eliminate costly grinding and regrinding. Give greater flexibility and versatility in application.

EveredE carbide tool holders are available for use in facing, turning, and boring operations on turret lathes, chucking machines, boring mills, etc., in production, and on engine lathes for toolroom use.

SAVE UP TO 75% OF GRINDING TIME AND EXPENSIVE DIAMOND WHEEL WEAR

Simplified operation. Stepped-up precision production. Savings of up to 75% of grinding time . . . and diamond wheel wear. EveredE carbide tool holders with TRIANGULAR shaped *solid carbide* tool bits automatically provide rake and clearance angles . . . permit quick, easy, simple conditioning of bits . . .

PROVEN!—in thousands of applications . . . in some of America's biggest and most vital production plants EveredE benefits mean bigger savings . . . plus faster precision production. EveredE facts cost you nothing. SEND FOR THEM TODAY!

EVEREDE Tool Co.
2000 N. Parkside Ave. • Chicago 39, Illinois

For more details circle NED-2112 on enclosed inquiry slip

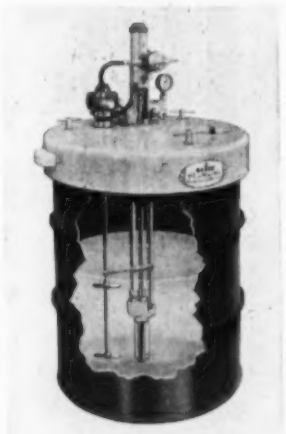
PLATFORM TRUCK & CRANE can transport as well as hoist and position heavy odd-shaped loads

Combination low lift platform truck and crane is designed to transport heavy machinery and maintenance materials as well as lift and position heavy, odd-shaped loads such as castings and large assemblies. In addition to standard 4000-lb capacity self-loading platform for carrying skids, truck is equipped with powered winch for pulling loads on or off platform. Boom swivels 180 degrees, and can hoist 2000 lb.

Individual motors power the drive, platform lift, winch and hook, through reduction units receiving their power from an electric storage battery or gas-electric unit. Winch platform and hook are controlled from both operator's position and load end, using remote control switch located on boom. Platform lift operates on three-link rocking mechanism protected from overload by safety link. Two-wheel drive, four-wheel steer is provided, and extension as well as fixed boom height is available. Maximum hook height is 57 in. with outreach of 61 in. Platform measures 26½ x 53 in. and lifts 5¾ in. Built by **Elwell-Parker Electric Co.**, 4502 St. Clair Ave., Cleveland 3, O.

For more details circle NED-2113 on enclosed inquiry slip

HEAVY MATERIAL PUMP air operated unit for paints and heavy coatings fits on large drums



Newer-type coatings, extremely heavy paints as well as other heavy or viscous fluids are handled in volume with this heavy-duty Paintmaster air-operated pump. Double-acting reciprocating pump delivers ample volume and pressure for supplying long-line circulating systems and multiple spray guns. Unit is also suitable for transferring fluids from one floor to another. Built-in circulating system will deliver paint directly to spray heads and back through supply lines.

Dual blade air-operated rotary agitator has twin blades which are adjustable to any depth. Full range of agitating speeds is available by means of micrometer type adjustment and keeps paint or other fluids thoroughly mixed to maintain uniform viscosity.

Heavy gage steel cover which fits standard open-top drums provides effective seal of container and is held in place with three hand screws. If inflammable fluids are handled, fire hazards can be minimized by housing unit in fireproof room. Made by **Gray Co.**, 1010 Sibley St., Minneapolis 13, Minn.

For more details circle NED-2114 on enclosed inquiry slip

SPEED HAND-LABELING ON HARD-TO-LABEL JOBS with Mystik Self-Stik LABELS

SPEED PRODUCTION—No moistening. Stick instantly.

EASY APPLICATION on hard-to-reach, hard-to-label surfaces.

FLEXIBLE and stretchable for curved or uneven surfaces.

PERMANENT—Resistant to stain, moisture, scuffing, delamination. Removable, if desired, without staining.

BEAUTIFUL—Finest color printing; die-cut; embossed; varnished or acetate laminated.

The outstanding qualities of MYSTIK LABELS are due to rubber-saturated stock and the strongly bonded rubber adhesive, providing strength, flexibility, toughness, strong adhesion and ease of handling. Write for full information and samples.

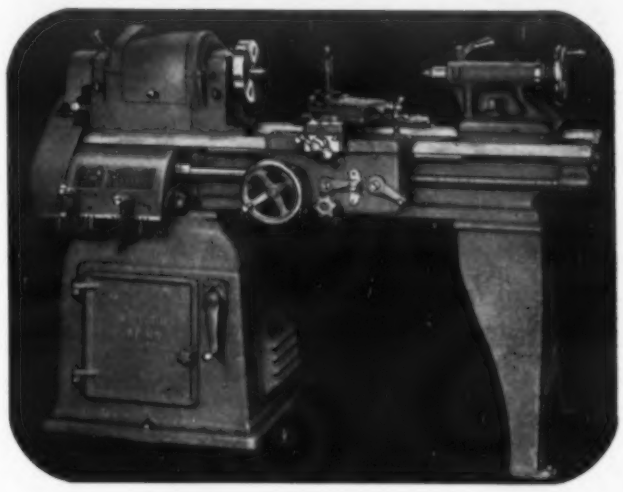
CHICAGO SHOW PRINTING COMPANY
CHICAGO • NEW YORK

2657 NORTH KILDARE • CHICAGO 39

For more details circle NED-2115 on enclosed inquiry slip

SOUTH-BEND

14½" LATHES FOR FAST PRECISION MACHINING

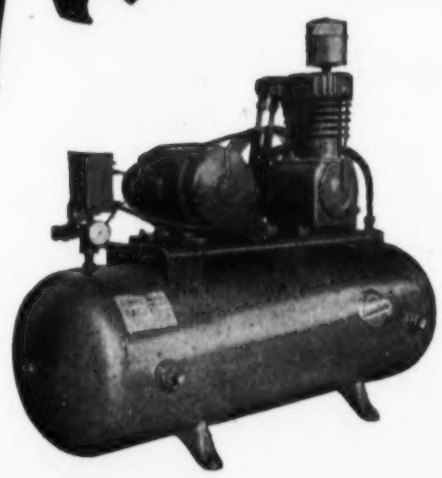


South Bend 14-1/2" Lathes hold down machining costs on work that requires extreme accuracy. They are fast and easy to operate . . . and readily adaptable to a wide variety of jobs. *Write for Catalog.*

SOUTH BEND LATHE
Building Better Tools Since 1906 • South Bend 22, Indiana

For more details circle NED-2116 on enclosed inquiry slip

NEW!



MOUNTED ON HORIZONTAL TANK

SCHRAMM

SMALL INDUSTRIAL COMPRESSORS ARE BUILT IN SIZES RANGING FROM ½ TO 5 H.P., FOR AUTOMOTIVE AND INDUSTRIAL PURPOSES

A SIZE AND TYPE FOR EVERY REQUIREMENT, available with horizontal or vertical tanks. Single stage units for working pressures up to 150 lbs., and two stage units for working pressures up to 200 lbs.

Write for your copy of catalog **GC-52**, *it is free.*

SCHRAMM INC. THE COMPRESSOR PEOPLE
WEST CHESTER PENNSYLVANIA

For more details circle NED-2117 on enclosed inquiry slip

WILLSON Safety Spectacles

Keep You on the Safe Side

Popular WK Plastic Frame Style with

- WILLSON Super-Tough* Lenses — flat or curved, clear or green
- Hi-Line, half-plastic cable temples
- Non-flammable, sheet stock plastic frame
- Two lens sizes, four bridge sizes

*Reg. U. S. Pat. Off.

More than 300 other Eye and Respiratory Safety Devices carry this trademark

WILLSON®
Dependable Products Since 1870

WILLSON PRODUCTS, INC., 219 Washington St., Reading, Pa.

For more details circle NED-2118 on enclosed inquiry slip

COMPRESSION TESTING MACHINE for use with various materials as well as containers and springs

Metal, ceramic, wood and plastic parts; paper boxes and other containers; soils; springs and similar materials are among those that can be tested on this lightweight, portable hydraulic compression machine. Load is applied to test specimen through hydraulic system actuated by compressed air. Load applied is indicated on dial of double proving ring, used to obtain greater accuracy. Low range is sensitive to loads of 0.1-lb.

Complete stress-strain data can be obtained by reading proving ring dial and specimen strain dial at intervals during the test. Load can be released instantly at any time. Standard model has capacity of 350 lb with air pressure of 100 psi; machines with capacities up to 1000 lb can be supplied on order. Air storage tank is available for use where air supply is not available. Made by **Labquip Corp.**, 4520 W. North Ave., Chicago 39, Ill.

For more details circle NED-2120 on enclosed inquiry slip

on their way to a tare —

scale. Now, if you have a drum handling problem requiring conveyors, let us suggest you call Alvey. Secure the advice and suggestions of experienced engineers. No obligation.

ALVEY
CONVEYOR MFG. CO.
9259 Olive St. Rd.
St. Louis 24, Mo.

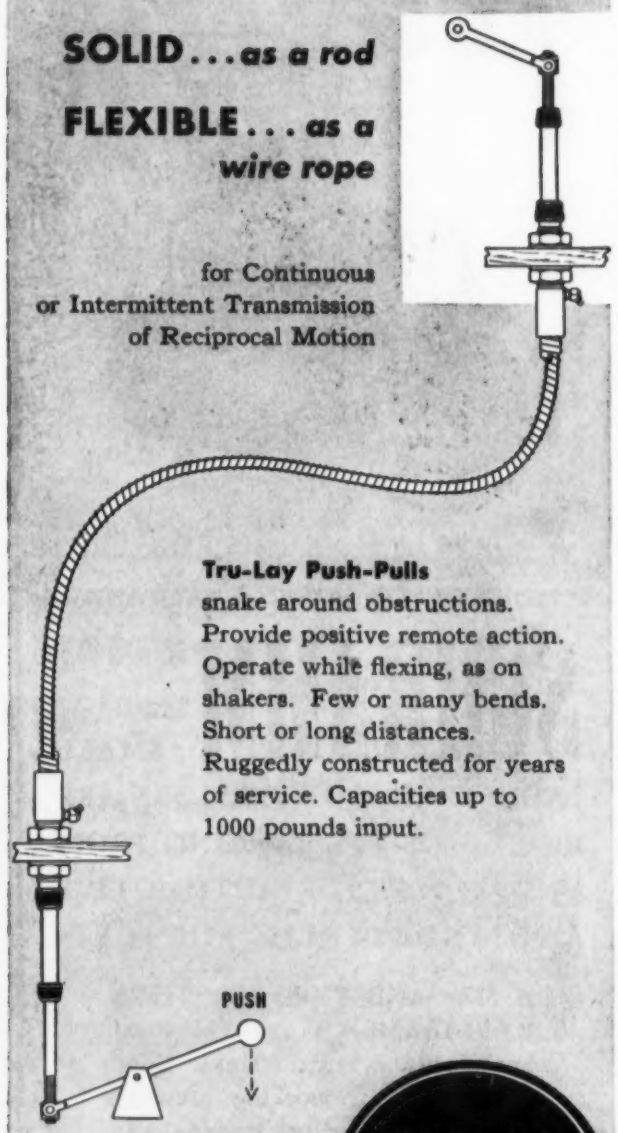
For more details circle NED-2123 on enclosed inquiry slip

an ACCO product

TRU-LAY PUSH-PULL CONTROLS

SOLID . . . as a rod

FLEXIBLE . . . as a wire rope



for Continuous or Intermittent Transmission of Reciprocal Motion

Tru-Lay Push-Pulls snake around obstructions. Provide positive remote action. Operate while flexing, as on shakers. Few or many bends. Short or long distances. Ruggedly constructed for years of service. Capacities up to 1000 pounds input.

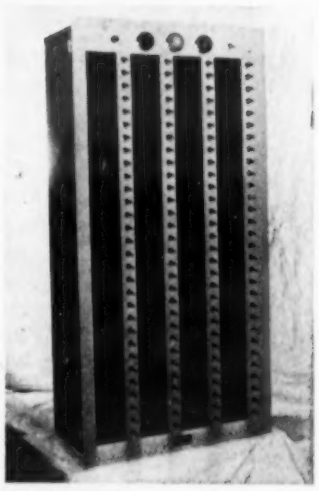
Write our Detroit office today for DH-287

TRU-LAY PUSH-PULL CONTROLS

ACCO
AUTOMOTIVE AND AIRCRAFT DIVISION
AMERICAN CHAIN & CABLE
601 Stephenson Bldg., Detroit 2
2475 Porter St., Los Angeles 21 • Bridgeport, Conn.

For more details circle NED-2119 on enclosed inquiry slip

ILLUMINATED-MESSAGE ANNUNCIATOR power plant type announces abnormal contact conditions



Supervision of 120 different factors with either open or closed circuit type actuating contacts is possible with type No. MLBR, design No. JK, service No. 116 Illuminated - Message Annunciator. Annunciators can be of any capacity from one section up, and they use plug-in type relays throughout, one mounted behind each section. Voltage is up to 250 v, ac or dc. A section measures 3¾ x 1½ in. and area for engraved message to be illuminated is 3 to 1 in. Section box of molded Bakelite holds up to three S6 bulbs.

Abnormal contact condition causes horn signal to sound and message lights up in two colors, red and white. When operator silences audible signal, message is lighted in red and remains so until contacts restore to normal, at which time bell sounds and message lights up in white. Switching toggle removes both sound and illumination of message. Cutoff of signal in one section does not prevent audible signal from sounding again in event of action in another section. Made by **H. R. Kirkland Co.**, 8010 King St., Morristown, N. J.

For more details circle NED-2121 on enclosed inquiry slip

ACROMARK MEANS "ACCURATE MARKING"

MARK— with NAME-PLATE & PARTS STAMPING MACHINES

STEEL LETTER & FIGURE STAMPS — HERCULES HOLDERS & TYPE

NUMBER— with NON-AUTOMATIC NUMBERING MACHINES

AUTOMATIC NUMBERING HEADS — SERIES 9A BENCH MARKING MACHINES

STAMP— with POWER DRIVEN MARKING MACHINES

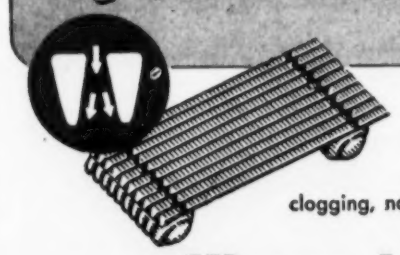
STEEL HAND STAMPS

WRITE FOR LATEST LITERATURE AND PRICE LISTS

The ACROMARK Company
7-11 MORRELL ST., ELIZABETH 4, N. J.

For more details circle NED-2124 on enclosed inquiry slip

BY ANY standard!



Cross section at left shows how KLEEN-SLOT SCREENS operate on a non-clogging, non-blinding principle.

Kleenslot
WEDGE-WIRE PREPARATION SCREENS

are the last word in efficiency of operation. Long life, precision workmanship and low cost make these screens the definite leader in the field. In spite of the tremendous demand for Wedge Wire Kleenslot Screens our plant is still able to fulfill orders promptly

SEND FOR OUR ILLUSTRATED CATALOG

Wedge-Wire CORPORATION
5604 CLARK AVE. CLEVELAND 2, OHIO

For more details circle NED-2122 on enclosed inquiry slip

GET all THE PERFORMANCE THAT MERCURY LAMPS AFFORD

Suspension type mounting of Transformer.

Jefferson Transformers keep lighting efficiency up,—servicing down.

The Jefferson design of Mercury Lamp Transformers insures full lamp efficiency,—accurate control of starting and operating currents.

They are easy to install, have roomy accessible wiring compartments, knockouts and *three* primary taps to select from and to closely match the voltage of the circuit for maximum lamp performance.

Get all the benefits of mercury lamp efficiency with specially designed Jefferson Transformers. New Bulletin 521-5 mailed on request.

JEFFERSON ELECTRIC COMPANY
Bellwood, Illinois
In Canada: Canadian Jefferson Electric Co., Ltd., 384 Pape Ave., Toronto, Ont.

JEFFERSON ELECTRIC
JEFFERSON MERCURY LAMP TRANSFORMERS

For more details circle NED-2125 on enclosed inquiry slip

EX-CELL-O HYDRAULIC POWER UNITS

...For Your Special Purpose Machines

Ex-Cell-O Hydraulic Power Units provide a compact, flexible source of power for feeding, rotating and retracting cutting tools. They are especially suitable for automatic drilling reaming and counterboring, using a single tool held directly in the spindle nose, or using two or more tools in a multiple spindle head. Three standard units are available—styles 28-A, 21 and 20, shown above. For full information send for Bulletin 45361.

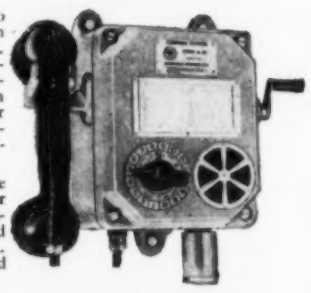
EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN

51-4

For more details circle NED-2126 on enclosed inquiry slip

U.S.I. SOUND POWERED
assures dependable communication

"BOMBS AWAY"
(in enemy language)



Could mean no communication in your plant . . . Any communication system depending upon outside power supply is unusually vulnerable.

Investigate the permanent, or emergency, systems offered through U. S. I. sound powered telephones.

WRITE FOR CATALOG DEPT. Y

UNITED STATES INSTRUMENT CORPORATION
SUMMIT---NEW JERSEY

For more details circle NED-2127 on enclosed inquiry slip

Chicago MOUNTED Wheels

...now even better with 79E BOND

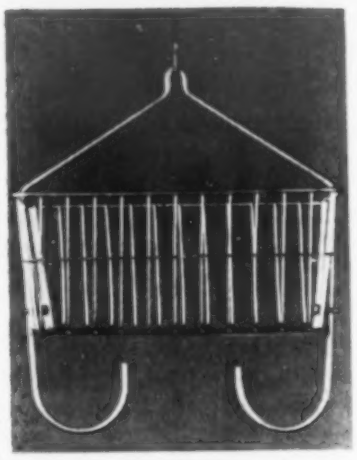
Buy Chicago Mounted Wheels—bonded with 79E Bond—and you'll never use any other!

79E—a tough new bond exclusive with Chicago Wheel—is the sensation of the industry . . . it does a BETTER grinding, burring, and finishing job FASTER. A size and shape for every use. Deliveries are excellent—Order today.

CHICAGO WHEEL & Mfg. Co.
Dept. NED • 1101 West Monroe Street, Chicago 7

For more details circle NED-2128 on enclosed inquiry slip

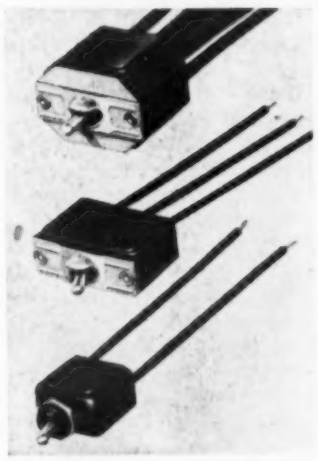
OVERHEAD LOCKER BASKET has more light and ventilation



Method of overhead storage of personal affects by overhead Lockerbasket makes more efficient use of space and gives more light and better ventilation. Rust resistant and tip-proof basket has over 1200 cu in. of basket space for storage of shoes, hat, packages and other articles. Garments are suspended back to back on hooks, thus allowing free circulation of air and preventing contact with clothes in adjacent baskets. Made by **Moore Co.**, 1036 Quarrier St., Charleston, W. Va.

For more details circle NED-2129 on enclosed inquiry slip

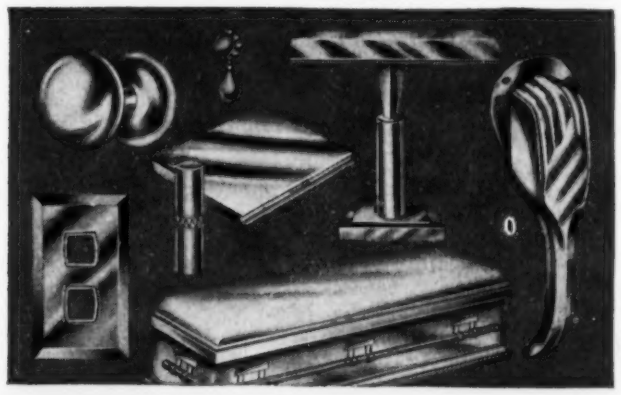
WATERPROOF TOGGLE SWITCHES ratings range from 20 to 200 amp



Originally developed to aircraft and military specifications, waterproof toggle switches control electrical circuits underwater, function from −65° to 165° F, and withstand salt spray, shock and vibration. They are furnished with ratings from 20 to 200 amp, in toggle arrangements of momentary "On" or "Off" and stationary "On" or "Off", and with one or two-hole mounting. Switch body is encased in molded rubber compound, and waterproof lead wires are vulcanized into rubber case and become integral parts of assembly, as does switch mechanism itself. In present stage or with slight modification, switches would be suitable for use with power tools, machine tools, vehicles, farm implements, appliances and in hazardous locations. Made by **Riverside Mfg. & Electrical Supply Co.**, 10228 Michigan Ave., Dearborn, Mich.

For more details circle NED-2130 on enclosed inquiry slip

DO YOU KNOW? Not only the more familiar uses of powdered aluminum in paint, roof coatings and irridescent auto finishes, but such unique applications as materials which provide heat without flames, sea markers that help locate downed airmen, bombs with destructive powers doubled and silicosis treatment are among the many subjects covered by an 84-page illustrated manual entitled "Aluminum Powders and Pastes." In addition to application data, physical properties, chemical properties, and recommended handling and storing procedures are discussed. Book will be sent only to those writing on their business letterhead to Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.



NOW...simulate copper, brass, bronze with M&W PLATELUSTRE

Apply a coating of the new PLATELUSTRE finishes to zinc or steel—and you wind up with products closely resembling copper, brass or bronze. Whether you have been using copper and its alloys for *making* products or for *plating* them, these finishes will help solve your problem.

Air-drying and baking types. Ask for free literature—or have an M & W Technical Service Engineer demonstrate PLATELUSTRE right in your own plant.

PIONEERS IN PROTECTION

MAAS & WALDSTEIN CO. 438 RIVERSIDE AVE. NEWARK 4, N. J.

Midwest Div.: 1658 Carroll Ave., Chicago 12, Ill. • Pacific Coast Div.: Smith-Davis Co., 10751 Venice Blvd., Los Angeles 34, Cal.

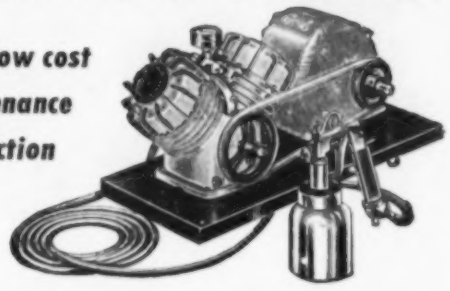
MANUFACTURERS OF INDUSTRIAL FINISHES

For more details circle NED-2131 on enclosed inquiry slip

Speedy Sprayer

PORTABLE PAINT SPRAYERS

for low cost plant maintenance and production



Dozens of handy, money-saving uses for these portable SPEEDY SPRAYERS! Operate anywhere in or out of your plant beyond the reach of air lines. Rugged, powerful, sprays all materials. Or use as source of compressed air, as vacuum pump or to inflate tires, etc. Absolutely clean, oil-free air assured by proved diaphragm principle employing no oily pistons. Order SPEEDY SPRAYER from your mill supply house or write direct for free catalog.

MODEL 444—½ H.P.
Heavy duty master twin. Delivers 4 cu. ft. air per minute at 40 lbs. Operates with ½ H.P. motor or gas engine. Complete with gun, 15 ft. air hose, less motor, $59.50

MODEL 890—¼ H.P.
2 cu. ft. air per minute at 30-40 lbs. pressure, less motor, $32.50

No. 778 Utility Paint Container for above models, holds 3 gals. paint. $19.95

W. R. BROWN CORP.
2673 Normandy Ave., Chicago 35, Ill.

Specialists in Portable Sprayers for over 20 years.

For more details circle NED-2132 on enclosed inquiry slip

More of industry's tough jobs go to YALE because...

EXCLUSIVE Features Equip YALE Electric Trucks For 'round-the-clock service

BECAUSE YALE Electric Trucks pay their way *better* by working *harder*—they're the first choice of users who want the *most* for their truck dollars. To discover how a YALE Electric Truck investment can accumulate *extra* handling savings for you—fill out and mail this coupon today.

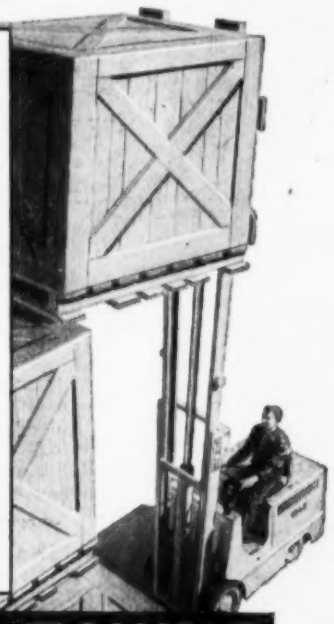
YALE is a registered trade mark of The Yale & Towne Mfg. Co.

• EXCLUSIVE YALE Hypoid Gears have more tooth surface for longer wear, greater shock resistance. They're completely enclosed in one oil-sealed unit.

• EXCLUSIVE YALE Involute Spline Drive Shaft resists fracture from wear fatigue—outlasts all others.

• EXCLUSIVE YALE Lift Channels are specially rolled for extra strength. Ball bearing rollers reduce channel wear, cut battery drain due to friction.

• EASY ACCESSIBILITY to battery permits rapid battery changes for recharging.



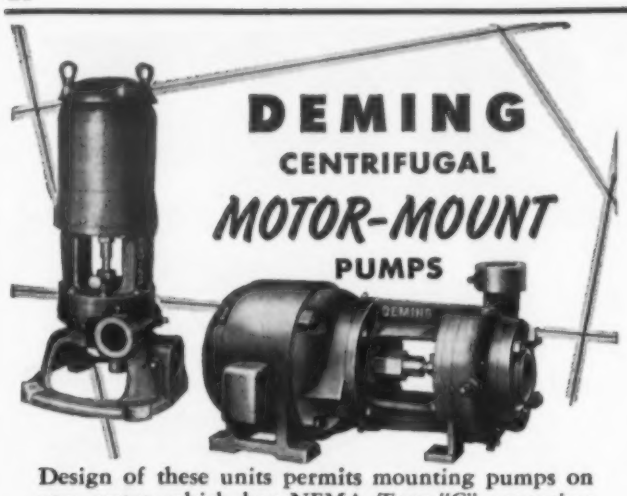
YALE & TOWNE

The Yale & Towne Manufacturing Co., Dept. 373
Roosevelt Boulevard & Haldeman Ave., Philadelphia 15, Pa.
Please send me your free new detailed bulletin, THE YALE ELECTRIC TRUCK

Company_____
Name_____ Title_____
Street_____
City_____ State_____
In Canada write: The Yale & Towne Mfg. Co., St. Catharines, Ont.

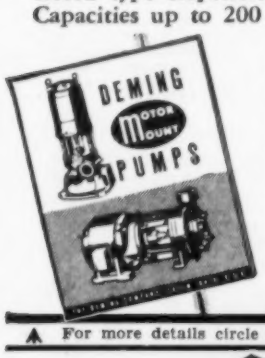
YALE GAS TRUCKS • YALE WORKSAVERS
YALE HAND TRUCKS • YALE HAND AND ELECTRIC HOISTS

For more details circle NED-2133 on enclosed inquiry slip



DEMING
CENTRIFUGAL
MOTOR-MOUNT
PUMPS

Design of these units permits mounting pumps on any motor which has NEMA Type "C" mounting flange. Two types "Vertical" and "Horizontal." Enclosed type impellers. Stainless steel pump shafts. Capacities up to 200 g.p.m. Heads up to 165 feet.



Send for Bulletin No. 4350
Three-color bulletin shows construction features and performance range of each of 25 sizes. Graphic charts simplify selection of specific units. Write for Bulletin No. 4350.

THE DEMING COMPANY
520 BROADWAY
SALEM, OHIO

For more details circle NED-2134 on enclosed inquiry slip

GREATEST SELECTION OF
GROUND FLAT STOCK
AVAILABLE ANYWHERE!
OVER 230 SIZES!

MORE standard sizes than ever before—to give you the correct size for your many requirements. This means further economy to you in the making of dies, punches, tools and machine parts. DoALL controlled analysis Oil Hardening Tool Steel is available in over 230 sizes, both in 18" and 36" lengths. Thicknesses range from 1/64" to 1½" and widths from 3/16" to 14". Each piece is individually packaged—ready for the layout bench. Ask for BULLETIN and FLAT STOCK SIZE AND PRICE CHART.

THE DoALL COMPANY
254 N. Laurel Ave., Des Plaines, Ill.

TS-7

Call DoALL for
Band Machines . . . Saw Bands . . .
Gaging Equipment . . . Cutting Tools
. . . Industrial Supplies

DoALL

For more details circle NED-2135 on enclosed inquiry slip

PRESS FEED FOR COILED STOCK
handles up to 3/32-in. thickness

Coiled stock in thickness up to 3/32-in. by 2-in. width is fed automatically in any length up to 2½ in. by this Grip-O-Matic feed for presses. It mounts directly on die set or bolster plate, is cam actuated and has feed equal to twice the amount of the cam movement. Feed can be on either the 'up' or 'down' stroke of press ram. Stock is gripped firmly while it is being fed to dies, but is released before die starts to form material. Thus, metal is free to float in response to die pilots or metal flow requirement of forming operation. Length of feed is infinitely adjustable from 0 to 2½ in. Made by **Jaco Devices, Inc.**, 95 High St., Hingham, Mass.

For more details circle NED-2136 on enclosed inquiry slip

TOOL ROOM LATHE
has 11-in. swing, 1-in. collet

An extra large headstock spindle mounted in heavy headstock casting is featured in series 1100 tool room lathe which has 11-in. swing and 1-in. collet capacity. Spindle turns on double and single row of precision ball bearings. Drawbar collet attachment is built-in and supplied as standard equipment, as is collet rack that clamps to the bed. Thrust bearings give smooth, accurate movement, and most carriage surfaces are machine finished, including top of saddle, to allow use of indicator. Compound base swivel provides extra rigidity with positive locking. The 360 degree dial has reference marks on both right and left side for easy reading and dials on cross and compound feeds are provided with instant adjustment. Lathe is finished in light gray. Made by **Logan Engineering Co.**, 4904 W. Lawrence Ave., Chicago 30, Ill.

For more details circle NED-2137 on enclosed inquiry slip

ELECTRONIC THICKNESS TESTER
checks metallic coatings accurately

Thickness of chromium, silver, tin, cadmium, zinc, brass, copper and nickel deposits can be measured accurately with model TT electronic thickness tester. Unit operates on 105-125-v ac and completes test in approximately 1 minute. Minimum thickness of most metals which can be measured is 0.00005-in. except that chromium as thin as 0.000005-in. can be checked. Maximum is indefinite. Device actually strips the plate from a predetermined area of approximately ⅛-in. diameter, and shuts off when test is complete. Made by **Kocour Co.**, 4800 S. St. Louis Ave., Chicago 32, Ill.

For more details circle NED-2138 on enclosed inquiry slip

"On machinery steps and platforms—
Wherever it is put—
Multigrip, the non-skid plate
Means safety underfoot."

U·S·S
multigrip
FLOOR PLATE

UNITED STATES STEEL COMPANY, PITTSBURGH
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.
UNITED STATES STEEL SUPPLY DIVISION, CHICAGO
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

Sold by leading distributors from coast to coast 2-403

UNITED STATES STEEL

For more details circle NED-2139 on enclosed inquiry slip

Use the BARBER COLMAN *Impressor*

on ALUMINUM COPPER BRASS BRONZE and PLASTICS

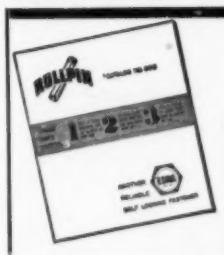
for Fast and Efficient HARDNESS TESTING

Comes in velvet-lined, fitted wood case with two extra points and full maintenance instructions.

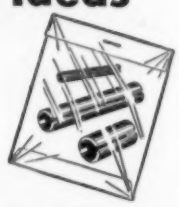
Works on the principle of forcing a hardened, spring-loaded steel point into the surface, the amount of penetration registering instantly on a dial indicator to give a dependable measure of hardness. Operator simply places Impressor on surface and presses down firmly. Can be used in any position, even against edges or ends of pieces when stacked. Requires little effort, ideal for women inspectors. Strongly built for durability and consistent accuracy. Thousands in use. Write for Bulletin F-1689-1.

BARBER-COLMAN COMPANY
1206 ROCK STREET
ROCKFORD, ILLINOIS

For more details circle NED-2140 on enclosed inquiry slip



FREE
Fastening Ideas
New Rollpin Bulletin
and sample Rollpins



For details on Rollpins, the self-locking, vibration-proof fasteners . . . for many new applications that will suggest ways of saving time and cutting costs in your own fastening—write today for the new Rollpin bulletin. You'll find it the most helpful and comprehensive literature ever offered on Rollpins.

We'll include a sample package of Rollpins—and we urge you to use them, try them and test them. Only then will you appreciate the design flexibility that permits Rollpins to save on almost any production line.

Rollpins are pressed-fit pins with chamfered ends. Simply driven into standard drilled holes, they lock permanently in place, exerting constant pressure against the hole walls. They are easily removed with a pin punch, and can be used again and again. Among their many money-saving applications are pinning gears, pulleys, levers and knobs, serving as locating dowels, stop pins, and as replacements for cotters, set screws or rivets. Write Elastic Stop Nut Corp. of America, 2330 Vauxhall Road, Union, New Jersey, Dept. R5-337.

ROLLPIN ELASTIC STOP NUT CORP. OF AMERICA ESNA

For more details circle NED-2141 on enclosed inquiry slip

PAGE FENCE *-Since 1883*
• AMERICA'S FIRST WIRE FENCE •

Sabotage is a danger which calls for vigilance day and night. Property line vigilance is the job for Page Chain Link Fence, now as it has been for more than 60 years. Consult the nearby, long-experienced Page Fence engineering and erecting firm, which will submit cost estimates without obligation. Name and address will be sent with illustrated fence data on request.

Write to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, New York or San Francisco.

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

For more details circle NED-2142 on enclosed inquiry slip

For more details circle NED-2143 on enclosed inquiry slip

WIRE MESH

Maybe it all *does* look pretty much the same at first glance. But when a firm has been making wire mesh for 70 years man and boy, there's bound to be a little more to it than meets the eye — a little more know-how in engineering and weaving, a little more quality in the product, a little more service and satisfaction for the user.

JELLIFF WIRE MESH is woven in all ductile metals

JELLIFF WIRE MESH is woven in all commercial weaves

JELLIFF WIRE MESH is woven in widths up to 72 inches

JELLIFF WIRE MESH is economical. Every foot runs true to the specifications.

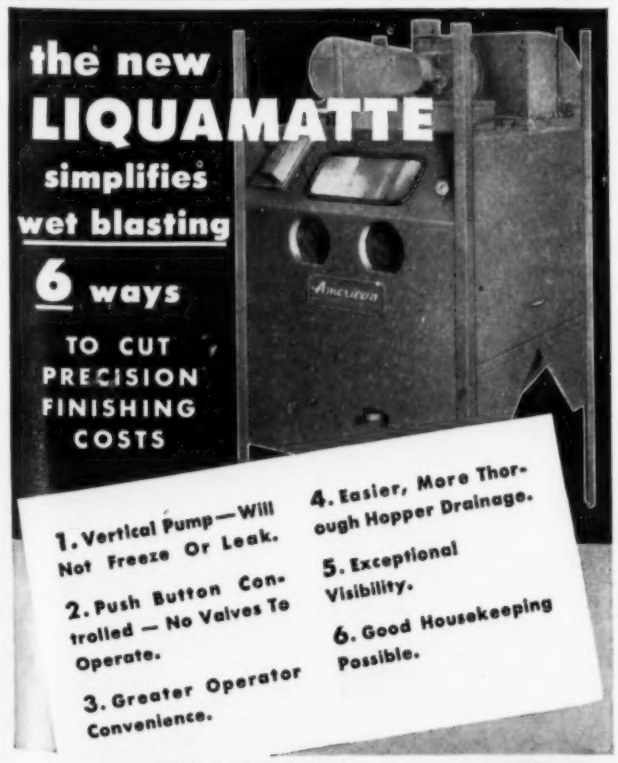
★ ★ ★ ★

JELLIFF WIRE MESH is a quality product and has been for 70 years. You can depend on it.

Write today for full details about JELLIFF WIRE MESH, JELLIFF WIRE MESH PRODUCTS, and JELLIFF'S CONSULTATION SERVICE on wire-mesh engineering. Address Department 11.

THE C. O. JELLIFF MFG. CORP.
DIPPING BASKETS
LEKTROMESH
RESISTANCE WIRE
WIRE MESH PARTS
WIRE CLOTH
STRAINERS • FILTERS
SOUTHPORT CONNECTICUT

For more details circle NED-2144 on enclosed inquiry slip



Write for Bulletin No. 23.

American LIQUAMATTE WET BLASTING
WHEELABRATOR & EQUIPMENT CORP.
508 S. Byrkit St., Mishawaka 8, Ind.

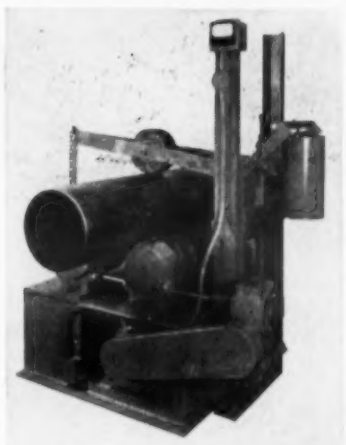
For more details circle NED-2145 on enclosed inquiry slip

MOBILE PATCHING UNIT
for maintaining drives, parking areas

Consisting of feed hopper, mixing conveyor, bitumen tank and tank heater, this mobile patching unit can be used for maintenance work on roads, streets, driveways, parking areas and small paving jobs. Heater uses either bottled gas or kerosene. Designed for use behind a truck, unit has 400-gallon tank which assures an adequate supply of bitumen for uninterrupted production. Mixer running through bitumen tank gives drying effect to aggregate. Bitumen can be circulated when machine is not mixing. Front and rear connection are provided for hand spraying. Up to 10 tons of freshly mixed material can be delivered hourly. Aggregate can be shoveled into hopper or fed by small elevator (optional equipment). Made by **Hetherington & Berner Inc.**, 751 Kentucky Ave., Indianapolis 7, Ind.

For more details circle NED-2146 on enclosed inquiry slip

PIPE ROTATOR
handles 4 to 30-in. diameter pipes



Finding application in hand welding, cutting or grinding or in automatic welding processes, pipe rotator can turn pipe and cylindrical objects with diameters from 4 to 30 in. It is easily adjustable for various diameters, is equipped with electronic variable speed drive, and has tachometer calibrated in inches - per - minute of welding or cutting speed. Also adaptable as assembly positioner for heavy round work, machine measures 39 x 34 x 76 in., has rubber tired rolls and 5000 lb load capacity. Unit is available to meet specified requirements. Outrigger facilitates handling long pipe or cylinders. Made by **Cecil C. Peck Co.**, Dept. N, 4614 Prospect Ave., Cleveland 3, O.

For more details circle NED-2147 on enclosed inquiry slip

DO YOU KNOW? An entirely new film with unusual heat resistance, strength and insulating properties is being produced experimentally. Limited quantities of this polyester film, named Mylar, are being evaluated in several industrial fields. Strength is two to eight times that of other commercial films. Gages as thin as 0.001-in. can be produced. Dimensions and properties are retained throughout wide temperature range. It has properties of intermediate electrical polarity, as well as high dielectric strength. Developed by E. I. du Pont de Nemours & Co., Wilmington 98, Del.

For more details circle NED-2148 on enclosed inquiry slip

SAVE Maintenance AND Towel Costs WITH

Sani-Dri ELECTRIC Hand or Hair Dryers

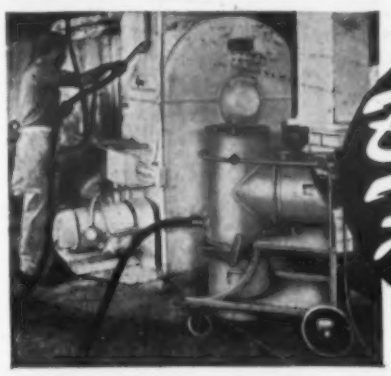
Save valuable maintenance time and eliminate continuing towel expense. New, improved features make Sani-Dri faster drying . . . provide quick, automatic hand or hair drying service 24 hours a day year after year! Sani-Dri is a permanent solution to washroom sanitation and drying problems—and SAVES UP to 85% of WASHROOM COSTS!

All Sani-Dri Electric Dryers are GUARANTEED, and have carried the Underwriter's Seal of Approval for over 18 years!

SEND FOR NEW BROCHURE showing all models and installation pictures.

Distributors in Principal Cities
THE CHICAGO HARDWARE FOUNDRY CO.
"Dependable Since 1897"
1932 Commonwealth Ave. • North Chicago, Ill.

For more details circle NED-2149 on enclosed inquiry slip



Better Foods WITH

SPENCER VACUUM

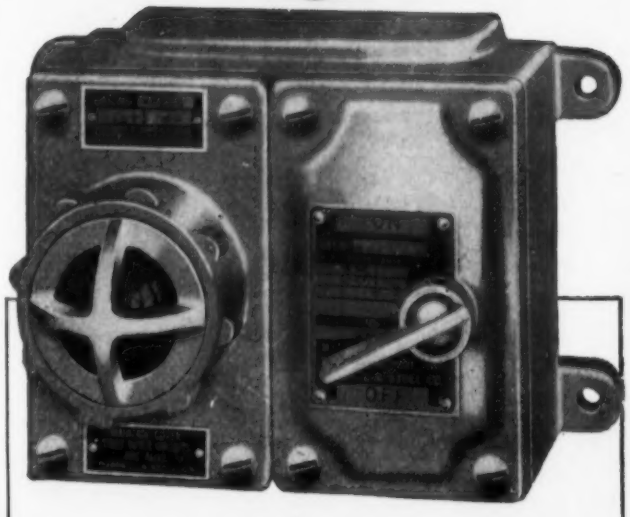
Basic plant sanitation should begin at the source of the hazard. If dust is generated by processes, Spencer Vacuum can be applied at the tool, or even inside the machine. If it comes in with your raw materials, it can be removed in the process of totally enclosed vacuum conveying. If it's gas from welding fumes, or tanks, Spencer can reduce the hazard at its source. And if it's vermin, Spencer will remove the nests, or with reverse connections, spray insecticides.

And above all, Spencer Vacuum keeps the floors, walls, overhead structures and all machinery constantly clean. Ask for Bulletin No. 125D on Spencer units from 1½ to 100 horsepower.

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT
SPENCER HARTFORD
439-3

For more details circle NED-2150 on enclosed inquiry slip

R&S EXPLOSION-PROOF EQUIPMENT



The wide variety of R&S explosion-proof equipment includes many standard enclosures—compact units possessing a high degree of flexibility and "packaged" safety. Circuit Breakers, EFS Switches, Push Buttons, Pilot Lights, Motor Starters, Combinations and individual Panels up to 32 circuits . . . all have slide operating mechanisms, removable front covers, abundant wiring space and conduit outlets . . . along with individual features that meet all standards, *plus!*

R&S custom-built panelboards composed of standard enclosures factory assembled, sealed and tested, offer many advantages over special designs and field assemblies.

WRITE FOR CATALOG H-47-15

RUSSELL & STOLL COMPANY, INC.
125 BARCLAY STREET • NEW YORK 7, N. Y.
C4

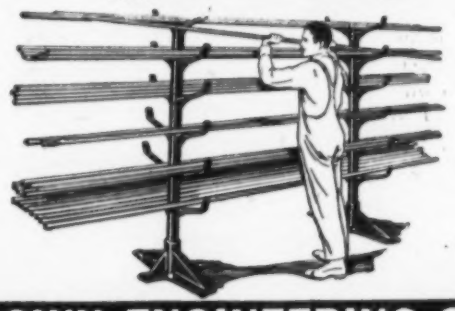
RUSSELL & STOLL
PRECISION-BUILT ELECTRICAL EQUIPMENT—SINCE 1902

For more details circle NED-2151 on enclosed inquiry slip

SPEEDS UP STOCK-ROOM SERVICE

The BROWN TIME-SAVING RACK saves the time previously lost end-hauling each bar of stock its entire length from the old-style, closed-side Rack, the Brown Rack requiring but a few inches of side movement. Each length, width and thickness of stock is displayed in goldfish visibility for instant selection. Workmen waiting for stock are served without waste of time, and returned to their production machines to turn out a maximum of output. Any time you require additional storage space, all you need do is to add more units. If you want to relocate it at any time, you can do so for it is unattached to the building. It is a simple, durable article made of metal in five styles. It can't burn, warp, sag or twist; depreciation is practically nil. SEND FOR BULLETIN No. 26-D DESCRIBING—

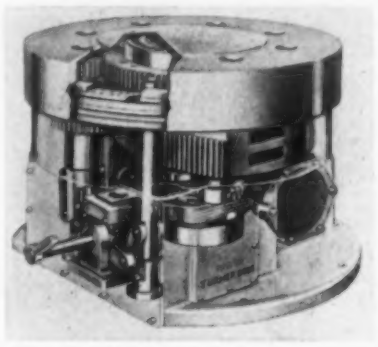
BROWN'S *QUICK-SERVE* RACKS



BROWN ENGINEERING CO.
129 N. THIRD ST. READING, PENNA.
RACKS • VISES • CLUTCHES • COUPLINGS

▲ For more details circle NED-2152 on enclosed inquiry slip ▲

INDEXING TABLE
heavy loads moved from station to station in 3/5-second



Every movement of Hautau-Turndex mechanical indexing table is controlled by uniform gear tooth area of master sector gear. Cams which control master gear sector directly, govern acceleration and deceleration of table to eliminate abrupt starting, stopping or catapulting action. Table is able to move heavy loads from station to station within 3/5-second indexing time. One horsepower is required to operate a 24-in. unit with an 800-lb load on table top. Standard units are available with from 2 to 26 stations, in any equal division of 360 degrees.

Table can be adapted to large number of stations or applied as driving unit for indexing larger rotary tables up to 12 ft in diameter. Milling, drilling, reaming, boring, crimping, stamping and assembling can be performed on table. Two optional table tops are offered: table top which revolves as single unit; and top divided into two sections, consisting of revolving outside indexing section and stationary center section for machining work outward from inside. Made by **Turner Bros., Inc.,** 2626 Hilton Rd., Ferndale, Mich.

▲ For more details circle NED-2154 on enclosed inquiry slip ▲

LAZY LIQUIDS
KEPT ON THE MOVE

Maybe it is Asphalt, Rosin, Wax, Sulphur, Syrup or some other LAZY Liquid. Heat them and they flow more readily. Heat the pipes that convey them also—and they continue to flow.

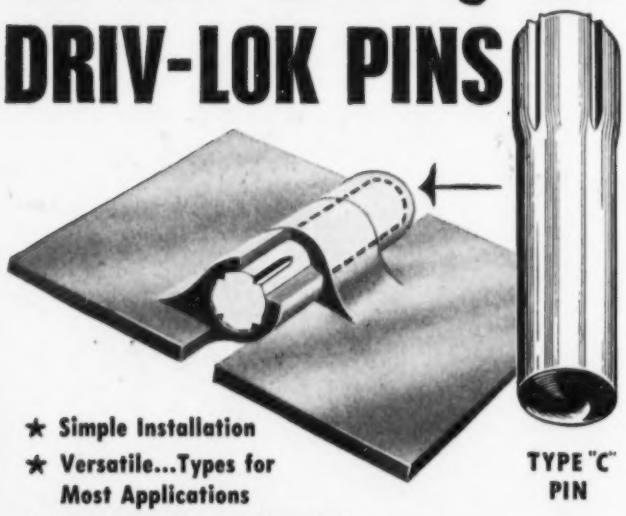
Steam, Hot Water, or Hot Oil circulated through Jacketed Piping and Fittings will do just that. Keep these otherwise lazy liquids on the move.

Parks-Cramer Jacketed Pipes come in sizes 1¼", 1½", 2", 3", and 4"—inside dimensions. Jacketed fittings include: two- and three-way Plug Cocks, Tees, 90° and 45° Elbows, Crosses, Expansion Joints and Relief Valves.

Parks-Cramer Company
ENGINEERS and CONTRACTORS
Fitchburg, Massachusetts

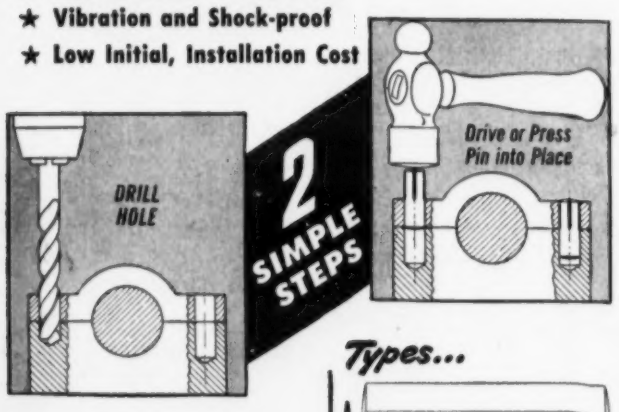
▲ For more details circle NED-2157 on enclosed inquiry slip ▲

Simple... Dependable...
low-cost fastening with
DRIV-LOK PINS

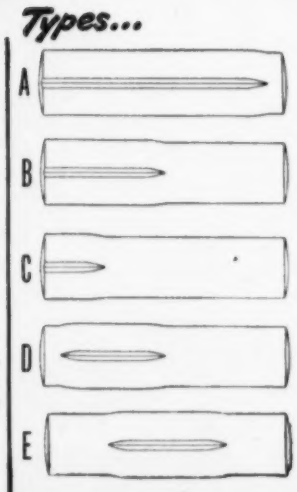


TYPE "C" PIN

★ Simple Installation
★ Versatile...Types for Most Applications
★ Wide Selection of Materials
★ Vibration and Shock-proof
★ Low Initial, Installation Cost



Types...



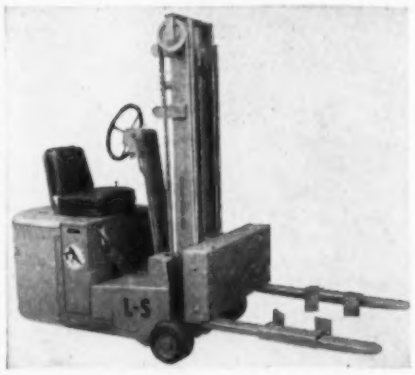
DRIV-LOK Pins are widely used as hinge and pivot pins because they permit maximum free rotation of one part, while remaining securely locked in the other. Quick, easy installation of DRIV-LOK Pins cuts assembly costs, waste motion is reduced and product improvement results.

DRIV-LOK Pins are made in many types to handle most applications. Write for catalog and samples, giving nature of your fastening problem.

DRIV-LOK PIN COMPANY
717 Chauncey St. • Sycamore, Ill.

▲ For more details circle NED-2153 on enclosed inquiry slip ▲

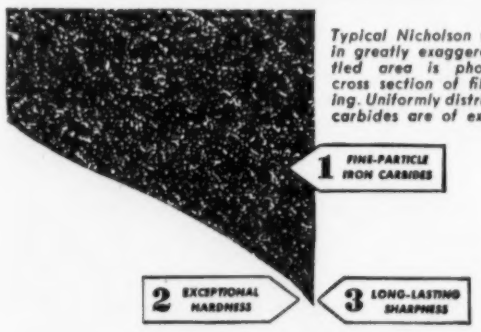
ELECTRIC FORK TRUCK
equipped with clamping forks for handling cylindrical objects



Hydraulic operated clamping forks which can be fitted with self-aligning rubber-faced gripping pads are available for Spacemaster 49 electric fork trucks, enabling them to handle drums and other cylindrical objects. Minimum distance between forks is 12 in. and maximum distance is 27 in. Hydraulic power is supplied from truck hydraulic system used for lifting and tilting load. Clamping pressure is controlled by hydraulic bypass relief valve which is adjustable to suit load.

Gripping pads, mounted in pairs on sleeves that fit over forks, can be removed so that forks can be used in conventional manner. Attachment can be used on 1000, 1500 and 2000-lb trucks which have rear wheel drive. Compact design permits right angle stacking in narrow aisles. Lifting, lowering, tilting of mast and control of two forward and reverse traveling speeds are pedal controlled. Made by **Lewis-Shepard Products Inc.,** 191 Walnut St., Watertown 72, Mass.

▲ For more details circle NED-2155 on enclosed inquiry slip ▲



Typical Nicholson file tooth shape in greatly exaggerated size. Mottled area is photomicrographed cross section of file after hardening. Uniformly distributed white iron carbides are of extreme hardness.

A good tip to remember

In a file, it's the tip of the tooth that counts. That's the part which does the work. On it depend the file's cutting efficiency and serviceable life. Nicholson metallurgy, tooth designing, cutting machinery, hardening processes—all combine to put onto Nicholson and Black Diamond file teeth the strongest, sharpest, longest-lasting tips science and human skill can achieve.

That's why the tips of the teeth give you the tops in value when you buy Nicholson or Black Diamond file brands. Your industrial distributor will back up that statement.

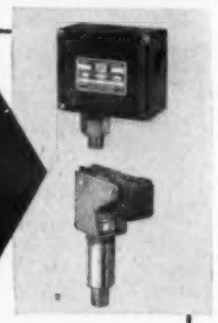
Read More About File Quality, kinds, use and care in Nicholson's famous 48-page illustrated book, "***File Filosophy.***" It's Free. Send for your copy.

NICHOLSON FILE CO., 34 ACORN STREET, PROVIDENCE 1, R. I.
(In Canada, Port Hope, Ont.)

NICHOLSON U.S.A. NICHOLSON A FILE FOR EVERY PURPOSE BLACK DIAMOND TRADE MARK

▲ For more details circle NED-2156 on enclosed inquiry slip ▲

TYPE J7
RUGGED, COMPACT, INEXPENSIVE PRESSURE CONTROLS
TYPE J40



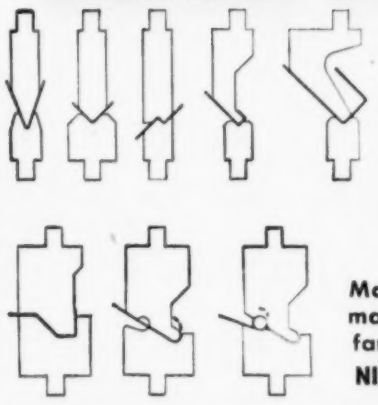
The Type J40 pressure control is a rugged, precision-built and inexpensive unit for use where light, compact and reliable controls, without head enclosures, may be used. It is used widely on industrial equipment, on aircraft and other engine applications. Complete specifications are covered in Bulletin #5-9. Write for one today.

The Type J7 is the most compact enclosed industrial pressure control offered by United Electric. It may be used for controlling gas, liquid or air pressure in applications where space and weight availability is a premium and where precise performance under rugged vibration conditions is a requisite. Bulletin #5-7 gives full details. Write for it today.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.
STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

▲ For more details circle NED-2158 on enclosed inquiry slip ▲

BRAKE DIES



MADE FROM FORGED CHISEL STEEL BILLETS

Made by the makers of the famous SEMCO NIBBLER PRESS

- MANY STILL IN USE EVEN AFTER 10, 20 AND EVEN 30 YEARS.
- THEY COST MORE BUT THEY LAST FOR YEARS.

Write for Estimates on Your Work and Ask for Latest Literature

SEMCO
SERVICE MACHINE COMPANY
INCORPORATED
202 MILLER STREET, ELIZABETH, N. J.

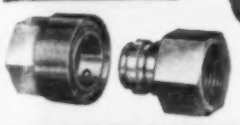
▲ For more details circle NED-2159 on enclosed inquiry slip ▲

Roylyn COUPLINGS

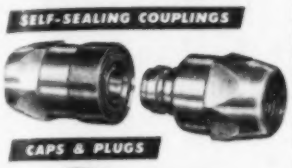
FOR MANY VARIED INDUSTRIAL USES

- RAILROAD DIESEL FUEL LINES
- MARINE FUEL LOADING LINES
- TANK & LINE PRESSURE TIGHT CAPS
- PROCESSING & CHEMICAL INDUSTRIES
- LIQUID & AIR TRANSFER LINES
- LOADING VALVES & CONNECTIONS
- CLOSED HYDRAULIC SYSTEMS

OPEN COUPLINGS



SELF-SEALING COUPLINGS



CAPS & PLUGS

HOSE ASSEMBLIES

Features like these mean CONNECT WITH ROYLYN!

- SIZE RANGE . . ¼ inch to 2½ inches. Up to 6 inches in some styles.
- PRESSURE RANGE . . . 650 to 6600 P.S.I.
- MATERIALS . . Aluminum alloy, brass, carbon steel, alloy steel and stainless steel.
- OPERATION . . . A simple "twist of the wrist"—NO TOOLS REQUIRED!
- POSITIVE LOCK . . . Locks with a "snap" and positively will not uncouple with vibration, pressure or rotation of the connected hose.
- SAFETY . . . Laboratory tests for extremes of heat, cold, vibration and years of hard service have proven its rugged reliability.
- VERSATILITY . . . Open nipple can be used with self-sealing coupling to provide shut-off on one side only. Also open coupling can be used with self-sealing nipple to provide check valve action.

There is a Roylyn Coupling available for practically any type of flexible connection for air, water, hydraulic and chemical applications. Write today for free illustrated catalog and nearest dealer. Inquiries regarding available dealerships are invited.

ROYLYN, Incorporated
1712 STANDARD AVE., GLENDALE 1, CALIF.
WUX, TWX GLENDALE, CALIF. 7158

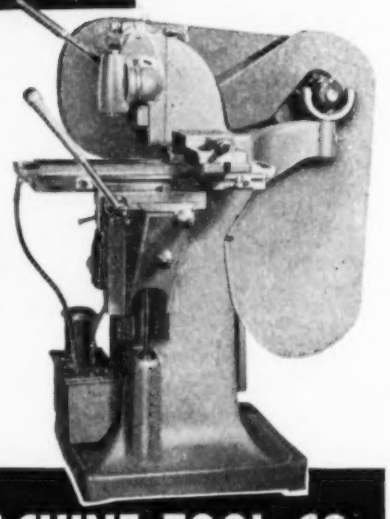
Roylyn makes Good Connections for You!

For more details circle NED-2160 on enclosed inquiry slip

U.S. No. 1 MILLING MACHINE

The No. 1 Value in all purpose high production hand-feed milling machines.

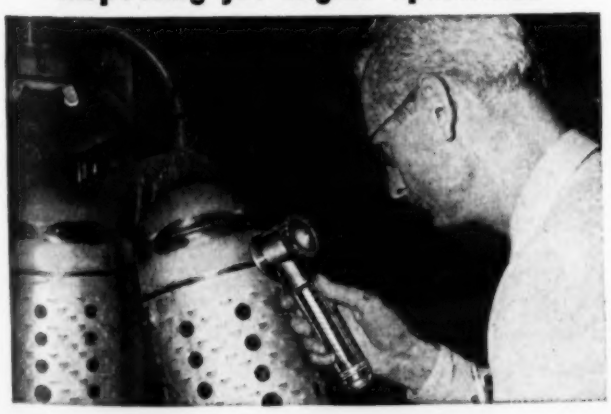
Send for information on power feeds universal milling head and other efficient attachments.



U. S. MACHINE TOOL CO.
A Division of the U. S. Burke-Machine Tool Co.
Brotherton Road 2 Cincinnati 27, Ohio

For more details circle NED-2161 on enclosed inquiry slip

Another FLASH-O-LENS at work—inspecting jet engine spotwelds



"The FLASH-O-LENS illuminated magnifier is of great value in guarding against any possible flaws in spotwelding jobs on jet engine components," says Mr. M. C. Ring, in charge of jet assembly and tooling inspection at Ryan Aeronautical Company, San Diego, California.

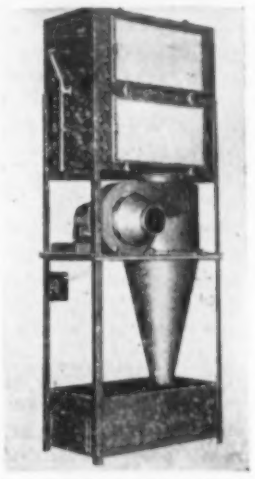
FLASH-O-LENS *illumination* puts light on the field of vision—and *not* in the worker's eyes. FLASH-O-LENS *magnification* gives sharp, detailed enlargement for accurate inspection.

You can save inspection time—improve product quality—with this compact instrument. Write today for free literature.

E.W. PIKE & COMPANY
492 NORTH AVE. ELIZABETH 3, N. J.

For more details circle NED-2162 on enclosed inquiry slip

LARGE DUST COLLECTOR is rated 3630 cfm at 6-in. suction and will serve several machines



Capable of collecting dust from as many as ten grinding wheels or four large wood-working machines such as planers, jointers or saws, model 3050 Dustkop industrial dust collector occupies only 8 sq ft of floor space. Self-clearing paddlewheel fan is driven by 5 hp motor to create 6-in. static suction on 8-in. inlet pipe while handling as much as 3630 cu ft of air per minute.

Dirt laden air is drawn by fan into cyclone separator which removes heavier particles of dirt. Second cleaning stage is large glass fiber filter which further cleans the air and returns it to work area with subsequent saving of heat. Unit is connected to machines with ductwork or flexible tubing.

Equipment is self-contained and can be moved around plant as production layouts are changed or modified. Only connection required is to power source. Either 220 or 440-v 60-cycle motors are standard, and delivery is 2 to 3 weeks. Made by **Aget-Detroit Co.**, 201 Main St., Ann Arbor, Mich.

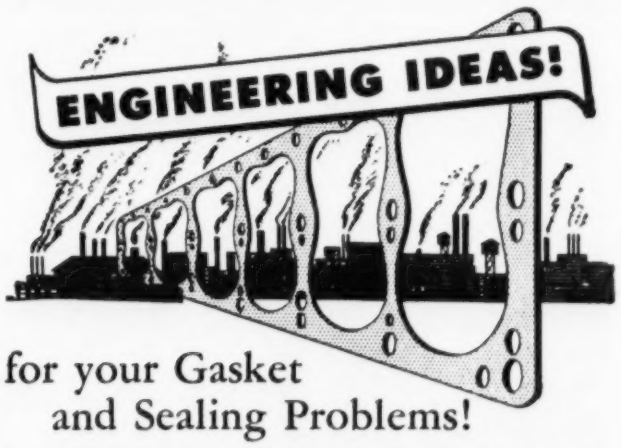
For more details circle NED-2163 on enclosed inquiry slip

POWER FLOOR SCARIFIER cleans 36-in. path at 1 to 11 mph and can lift and dump 530-lb loads

Tough layers of grease, dirt and metal chips can be sheared off large trucking aisles "on the run" with heavy-duty floor scarifier capable of cleaning 36-in. path at 1 to 11 mph. Its capacity ranges from 20,000 to 60,000 sq ft per hour depending on thickness of grime. Smooth, planing cleaning action is provided by steel wire brush scarifying cylinder whirling at 1400 rpm which levels humps and leaves aisles smooth and dry for immediate trucking. Another accessory, the Revo-tool cylinder which contains hundreds of tool steel cutters, can be employed to pulverize extra-heavy soilage like metal chips, dried paint or varnish, tar and cement splashes. It can also be used to score concrete for new topping.

Powered by 25-hp air-cooled engine, cylinder hurls loosened grime into built-in hopper pivoted so it floats over floor irregularities. At same time vacuum pulls lighter dirt into fabric bag. Hydraulically controlled, hopper can lift ¼-ton loads to 35-in. clearance and dump them into trash boxes within 18 seconds. A four-cylinder, 25-hp Wisconsin engine propels machine through both rear wheels. Made by **G. H. Tennant Co.**, 2586 N. Second St., Minneapolis 11, Minn.

For more details circle NED-2164 on enclosed inquiry slip



for your Gasket and Sealing Problems!

Looking for new ideas on gasketing or sealing? Let Fel-Pro Engineers help you solve these problems. For over 30 years Fel-Pro has designed and developed sealing materials, gaskets, etc. for industry. This experience can be put to work for you. Send us details and specifications on any of your specific requirements for our cost-cutting, product-improving ideas and recommendations. Write: FELT PRODUCTS MFG. CO., 1510 Carroll Avenue, Chicago 7, Ill.

5520NED

FEL-PRO ENGINEERED gaskets
Utilize Newest Materials
Specifically designed for your product

For more details circle NED-2165 on enclosed inquiry slip

SEND FOR THIS NEW BULLETIN

Describing VOLTAGE REGULATORS For Small Alternating Current Generators

THIS NEW BULLETIN describes Type V-00 and 221 *Rocking Contact* Regulators. These generator voltage regulators control voltage by automatically changing resistance in the exciter shunt field circuit. Only a small rocking movement of the contact sector over the curved commutator is required to cover the entire regulating range. Response is fast and accurate . . . sliding friction eliminated and wear minimized.

The V-00 regulator is used on ac generators with direct connected exciters to 157 kva at 3600 rpm . . . Type 221 is used on ac machines with direct connected exciters to 438 kva at 3600 rpm.

Ask your A-C representative for this new descriptive bulletin, or write Allis-Chalmers, Milwaukee 1, Wis., for Bulletin 14B6143A.

A-3620

Rocking Contact is an Allis-Chalmers trademark.

ALLIS-CHALMERS

For more details circle NED-2166 on enclosed inquiry slip

- ☐ Deburring
- ☐ Surface finishing, lubrication control
- ☐ Removing heat treat scale
- ☐ Preparing surfaces for electroplating
- ☐ Removing and blending grinding lines
- ☐ Finishing threaded sections for fit
- ☐ Improving die manufacturing and maintenance
- ☐ Improving cutting tool life and appearance
- ☐ General maintenance cleaning

The amazing versatility of Hydro-Finish, Pangborn's modified form of impact blasting using an abrasive suspended in liquid, will solve these and other problems for you! By varying abrasive size and hardness, air pressure, distance from work, and ratio of liquid to abrasive, almost any type of precision finishing can be accomplished faster and better!

For example, with Hydro-Finish on your production line, surfaces hold electroplating better . . . paints, rubber and plastics are bonded better because Hydro-Finish forms a "tooth" on your work. Threaded pieces turn more easily. Dies are cleaned better, surfaces are improved, production is speeded, and tools last longer.

Get the facts! Write today for Bulletin 1400A and learn how Hydro-Finish can help you! Address: PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md.

Look to Pangborn for the latest developments in Blast Cleaning and Dust Control equipment

Pangborn

BLAST CLEANS CHEAPER with the right equipment for every job

For more details circle NED-2167 on enclosed inquiry slip

Chem-Board Tote Boxes

HELP BUILD RADAR

Much of the radar needed to scan the skies for our country's safety is being built from materials and parts carried to production lines in Convoy Chem-Board Tote Boxes. The self-stacking boxes illustrated seal their contents from dust and light . . . stack to ceiling without support.

Chem-Board is made of corrugated fibre-board, chemically-impregnated by Convoy's exclusive process. It is flint hard and rock strong. It is not weakened by moisture. It is impervious to machine oils. Convoy Tote Boxes cost and weigh 50% to 60% less than steel. The lightness, toughness and economy of Chem-Board Tote Boxes are unmatched. Tell us the style you use . . . we'll send a free production sample from the next run for you to test. As a guide for present and future availability, our current production capacity is reserved for the unprecedented demands from old customers and "DO" orders. Orders rated DO-MRO are acceptable. Write today.

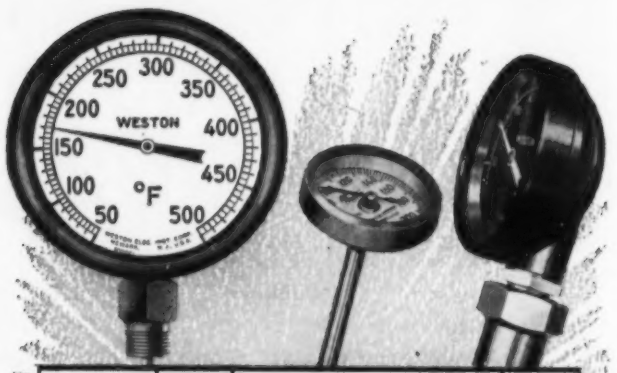
Standard and Custom-made
Nesting — Stacking — Vertical
CHEM-BOARD TOTE BOXES

CONVOY, INC.
P. O. Station B, Box 216-N
CANTON 6, OHIO

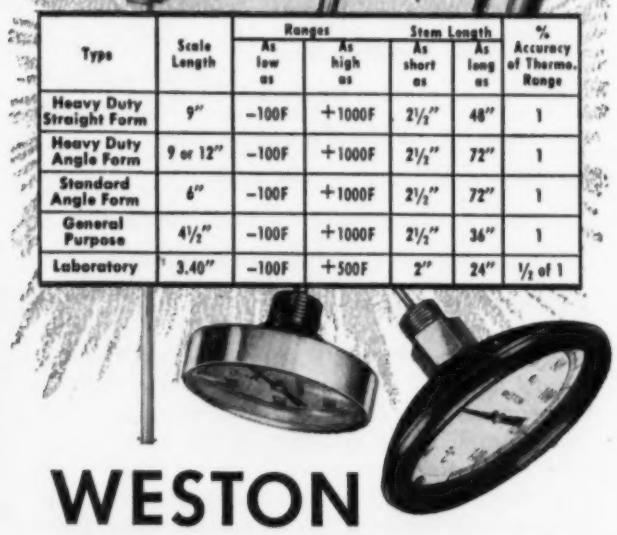
For more details circle NED-2168 on enclosed inquiry slip

Available

in broadest selection of types, ranges, stem lengths



Type	Scale Length	Ranges As low as	Ranges As high as	Stem Length As short as	Stem Length As long as	% Accuracy of Thermo. Range
Heavy Duty Straight Form	9"	−100F	+1000F	2½"	48"	1
Heavy Duty Angle Form	9 or 12"	−100F	+1000F	2½"	72"	1
Standard Angle Form	6"	−100F	+1000F	2½"	72"	1
General Purpose	4½"	−100F	+1000F	2½"	36"	1
Laboratory	3.40"	−100F	+500F	2"	24"	½ of 1



WESTON

all-metal THERMOMETERS

WESTON Thermometers give you *all* the advantages of all-metal construction *to an unmatched degree*. The durability of stainless steel stems . . . the readability of large, boldly marked scales . . . the sustained accuracy due to precision manufacture *proved* through the years. Order through your regular jobber, or your local WESTON Representative. Catalog T-13 on request . . . WESTON Electrical Instrument Corporation, 617 Frelinghuysen Ave., Newark 5, New Jersey . . . *manufacturers of Weston and TAGliabue Instruments.*

WESTON

Temperature Instruments INDICATE—RECORD—CONTROL

9288

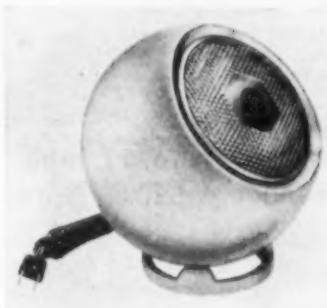
For more details circle NED-2169 on enclosed inquiry slip

HOPPER & BIN VIBRATOR
provides all-directional vibration

Powerful all-directional vibration that effectively moves bulk materials without damage to faces of hoppers or bins is provided by model DV 51 Vibrolator. Vibrator employs 2-in. diameter ball weighing 1 lb which is pneumatically driven around stationary hardened and finish-ground two-rail race. It is easily installed, instantly self-starting, quiet in operation and requires little maintenance and no lubrication. Vibrator has found successful application as standard equipment on large sand feeders found on blower machines. It is equally applicable in moving gravel, chemicals, food products, cement, grains, coal and other materials that resist movement toward hopper outlets. Made by **Martin Engineering Co.**, Kewanee 3, Ill.

For more details circle NED-2170 on enclosed inquiry slip

ALL-ANGLE SPOTLIGHT
uses spot, flood or color lamps



Having one-piece aluminum case with satin finish, this all-angle Focalite is designed to accommodate a Par 38 spot, flood or color beam reflector lamp. It rests on a flocked tripod base that will not mar any finish. Instantly adjustable to any angle, it always maintains its focused position. Unit is equipped with 6-ft cord and plug. Made by **Amplex Corp.**, Dept. FP, 109 Water St., Brooklyn 1, N. Y.

For more details circle NED-2171 on enclosed inquiry slip

FERRULE CONTRACTING MACHINE
speeds fitted hose production

Air-operated No. 1165 ferrule contracting machine is an adaptation of air cylinder power to standard hand-operated No. 5111 die type contracting machine. Operated from shop air line, machine speeds production of uniform fitted hose lengths. Interchangeable dies enable setups for various size ferrules. Foot pedal operation permits use of both hands to feed and remove work. Made by **Scovill Mfg. Co.**, A. Schrader's Son Div., 478 Vanderbilt Ave., Brooklyn 17, N. Y.

For more details circle NED-2172 on enclosed inquiry slip

Engineers Like GORTON
Tracer-Control Versatility

One of 10 Standard Gorton Tracer-Controlled Pantographs and Duplicators.

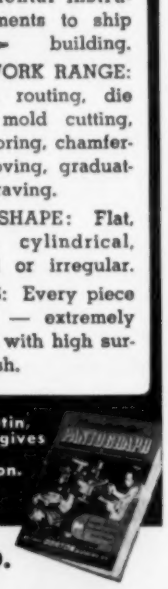
WORK SIZE: Tiny parts up to areas 10 by 20 feet . . . from dental instruments to ship building.

WORK RANGE: Profiling, routing, die sinking, mold cutting, counterboring, chamfering, grooving, graduating, engraving.

WORK SHAPE: Flat, curved, cylindrical, spherical or irregular.

RESULTS: Every piece identical — extremely accurate, with high surface finish.

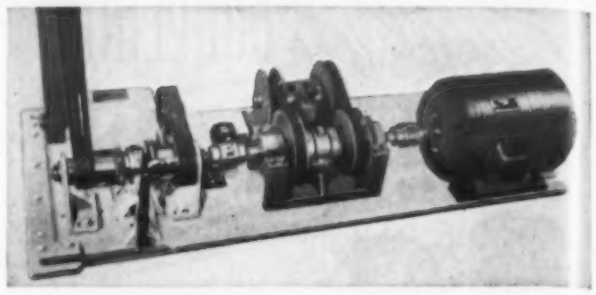
Free bulletin, No. 1580, gives complete information. Write for it today.



GEORGE GORTON MACHINE CO.
1903 Racine St., Racine, Wisconsin

For more details circle NED-2173 on enclosed inquiry slip

CARRIAGE TRAVEL LIMITS HELD WITHIN .002"



. . . with Star-Kimble Brakemotors on Rivett Lathes

Limit switches controlling the power supply to a Star-Kimble Brakemotor stop the carriage travel of the 1020S Precision Lathe built by Rivett Lathe & Grinder, Inc., Boston, Mass.

Mechanism has been operated an almost unlimited number of times, according to the Chief Engineer of Rivett—and accuracy of the stop has been within .002", every time!

In application after application, Star-Kimble Brakemotors have been giving split-second stops, over and over again, in the toughest of start-stop cycles.

Get the full facts—write for free Bulletin B-501-A

STAR-KIMBLE
MOTOR DIVISION OF
MIEHLE PRINTING PRESS AND MFG. CO.
214 Bloomfield Avenue, Bloomfield, New Jersey

For more details circle NED-2174 on enclosed inquiry slip

BIG HELP

. . . in improving the efficiency of machine tools, presses and other equipment that can't be replaced.

GEROTOR

HYDRAULIC PUMPS

GEROTOR MAY CORP., BALTO. 3, MD.

For more details circle NED-2175 on enclosed inquiry slip

HERE'S A QUICK-LIFT TIME-SAVER FOR YOU!

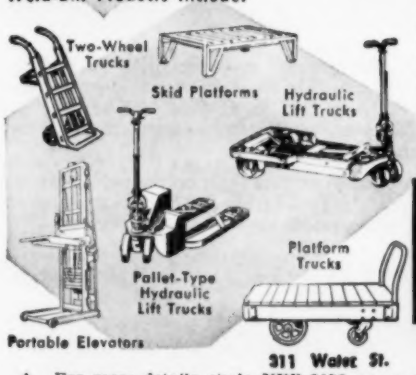
NEW SINGLE STROKE MECHANICAL LIFT TRUCK

"Weld-Bilt" PRODUCTS
WEST BEND EQUIPMENT CORP. WEST BEND WIS.

Push this new Weld-Bilt Truck under a load, give the handle one quick stroke — and you're ready to roll! With the full 360° swivel you can easily maneuver the load. And you can lift the load from ANY ANGLE within 270°. Many other features make this new WELD-BILT Mechanical Lift Truck important to your materials handling operations . . . features like the Handle Safety Spring that keeps handle in safe vertical position when not in use; Automatic "anti-kickback" Handle Release; smooth, full-hydraulic lowering; Front Wheel Equalizer to keep load level and eliminate handle shock and whip . . . and many others.

This new addition to the popular "Weld-Bilt" line can save time and money in your operations. Let us tell you about it — without obligation! It's available in narrow and wide widths, standard lengths, for capacities up to 2500 lbs.

Weld-Bilt Products Include:



WEST BEND EQUIPMENT CORPORATION
MATERIALS HANDLING ENGINEERS
311 Water St. WEST BEND, WIS.

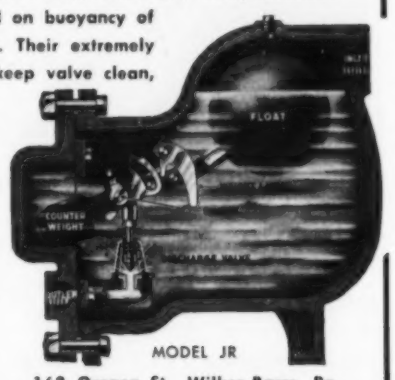
For more details circle NED-2176 on enclosed inquiry slip

Nicholson W. O. Traps Are

LEAKPROOF IN SUPER HEAT

Can't Cook Dry! Never Need Priming!

Nicholson weight-operated traps will not leak live steam, even though body may become completely dry due to re-evaporation. Unlike most bucket and float traps, Nicholson units do not depend on buoyancy of float to raise valve. Their extremely large orifices also keep valve clean, preventing blow-through. Three types for every heavy - duty use; pressures to 1500 lbs. Working parts of stainless steel. Also for air and gasoline.



Catalog 751 162 Oregon St., Wilkes-Barre, Pa.

W. H. NICHOLSON & CO.

TRAPS · VALVES · FLOATS

▲ For more details circle **NED-2177** on enclosed inquiry slip ▲

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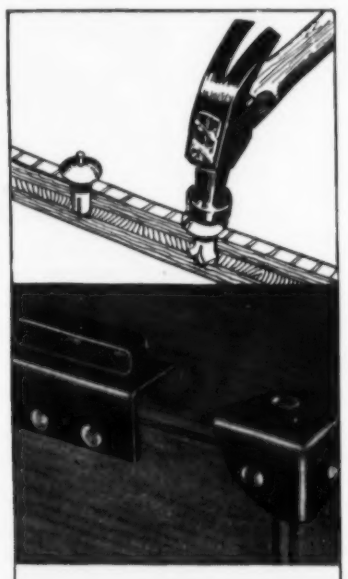
metal to wood

fast and good!



no special tools . . . maximum grip without bucking

PAT. PENDING—RIVET AND MFG.

Placed in blind hole, Southco Drive Rivets are driven like nails. You get a metal-to-wood fastening that grips securely, resists vibration, does not project through to deface the reverse side. Use the same standard rivet as for metal-to-metal applications . . . get the same strength, the same speed, same one man operation, same time and money savings. No "special," costly fastenings, no special tools, no bucking-up, trimming, grinding or finishing.

You can save time and money with Southco Drive Rivets. Let us show you. Send for complete data. Southco Div., South Chester Corp., 1413 Finance Bldg., Philadelphia 2, Pa.

Important for military contractors!
Prompt deliveries now possible.

SOUTHCO FASTENERS

PAWL, SCREW AND SPRING • DRIVE RIVETS
ANCHOR NUTS • ENGINEERED SPECIALTIES

OFFICES IN PRINCIPAL CITIES

WHEREVER TWO OR MORE PARTS ARE FASTENED TOGETHER, STANDARD AND SPECIAL DESIGNS FOR IMPROVED PERFORMANCE AND LOWER PRODUCTION COSTS

▲ For more details circle **NED-2178** on enclosed inquiry slip ▲

HIGH ACCURACY TACHOMETER
three models cover 36 to 100,000 rpm

Accuracy within ¼-per cent in precision speed measuring overspeed tests, production application, such as in turbine motor and dynamometer test stands, and laboratories is possible with this line of tachometers. Accuracy is sustained by calibration adjustments mounted on front of instrument. Ten overlapping ranges, instantly selected by rotary switch, provide more than 10 to 1 spread in speed. Three models cover speeds of 36 to 100,000 rpm. Sole moving part in indicator is pointer suspended in jeweled pivots. Fixed installation indicator with crackle finish is suitable for panel or bracket mounting. Meter is mounted in sponge rubber. Hand engagement or fixed installation heads for wide variety of speed engaging applications are available for use with indicator. Made by **Metron Instrument Co.**, 436 Lincoln St., Denver 9, Colo.

▲ For more details circle **NED-2179** on enclosed inquiry slip ▲

PORTABLE CIRCUIT EXTENSION
mounted on tubular steel carriage

Light, power or heat can be brought to locations where wiring system is not convenient for use with NE Rolla-Duct series of portable branch circuit extensions. Series includes power and light units, strip of flood lighting and strip of infra-red heating units, fully grounded and provided with circuit breakers. Portable assembly consists of 3-ft, 10-in. strip of No. 1700 Surfaceduct which is swivel-mounted on tubular steel carriage. Unit's wheels are non-conductive and resist chemicals, moisture, oil and wear. Duct can be elevated to 5½ ft, and carriage can be collapsed to roll under jobs. Three-conductor power line is 21 ft long and covered with Neoprene jacketing. Units are rated 20 amp for 115 or 220-v operation. Made by **National Electric Products Corp.**, Thirteenth Floor, Chamber of Commerce Bldg., Pittsburgh 19, Pa.

▲ For more details circle **NED-2180** on enclosed inquiry slip ▲

DO YOU KNOW? The Department of Commerce has created a "brain bank" or Clearing House for Beneficial Suggestions. Its function will be to pool and interchange all ideas from manufacturers which will be of benefit to the nation's current defense production efforts. Letters are being sent to industrial leaders asking their cooperation. For full information, write to Suggestions, U. S. Department of Commerce, Washington 25, D. C.

▲ For more details circle **NED-2181** on enclosed inquiry slip ▲

STOP ACCIDENTS

***with* BRADY SAFETY SIGNS**

Here's an AMAZING BRAND NEW SAFETY SIGN that will be welcomed by Safety Men! Brady Safety Signs stick to wood, glass, metal, concrete, etc. without moistening. May be applied to any clean surface in a jiffy. No screws, nails, bolts or skilled help necessary. All you do is peel from card, apply where wanted and the sign is up to stay.

Brady Safety Signs are made of durable cotton cloth, Silicone Coated to resist dirt, grime and moisture. CONFORM TO ASA Standard Z35.1-41. Select your requirements from a complete catalog of standard safety messages. Cost only a few cents per sign. Immediate delivery. Specials made to order.

WRITE FOR Free SAMPLES AND USEFUL CATALOG

WIRE MARKERS · PIPE MARKERS · SAFETY SIGNS · PRINTED "SCOTCH"-TAPE · MASKS & STENCILS

MANUFACTURERS OF SELF-STICKING PRODUCTS

W. H. BRADY COMPANY

1669 E. SPRING STREET • CHIPPEWA FALLS, WIS.

▲ For more details circle **NED-2182** on enclosed inquiry slip ▲

Cut Polishing Time Improve Surface Quality

with "LINDE" FINE ALUMINA POWDERS

Obtain superior finishes, free from microscopic pits and scratches in a fraction of the usual polishing time. Use less abrasive and use it directly without levigation and other wasteful preparatory steps. They can also be compounded with waxes and used in stick form.

LINDE Fine Alumina Powders are characterized by ultra-fine, uniform particle size, high purity, and swift polishing action. They have gained wide-spread acceptance in polishing materials ranging from metallographic specimens to gemstones and noble metals.

Call or write any LINDE office and we will be glad to discuss your particular polishing applications.

	Type A	Type B
Chemical Composition	Alpha Al_2O_3	Gamma Al_2O_3
Particle Size (approximate)	0.3 Microns	Less than 0.1 Microns
Hardness (Moh's) (Equivalent to crystalline material)	9	8
Crystalline Structure	Hexagonal	Cubic

The term "Linde" is a trade-mark of Union Carbide and Carbon Corporation.

LINDE AIR PRODUCTS COMPANY
A DIVISION OF UNION CARBIDE AND CARBON CORPORATION
30 East 42nd Street, New York 17, N. Y. UCC Offices In Other Principal Cities
In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto

▲ For more details circle **NED-2183** on enclosed inquiry slip ▲

ENGRAVE

PANELS OF ANY DIMENSIONS IN YOUR OWN SHOP with the Engravograph

The only portable machine which reproduces 15 sizes from one master alphabet.

The only one with adjustable copy holding slides for multi-line engraving in one set-up.

Self-centering holding vise for nameplates.

Send for Booklets
I-S—26 portable model • H—26 heavy duty model

NEW HERMES, Inc. 13-19 University Place, N.Y. 3
In Canada: 359 St. James St., Montreal
World's Largest Manufacturer of Portable Engraving Machines

▲ For more details circle **NED-2184** on enclosed inquiry slip ▲

HOW TO SPEED Drum Handling and Save Money

Exclusive! American Drum and Barrel Cradles are designed for one-man handling.

Exclusive! American's disappearing patented loading bar adds speed and safety.

Exclusive! American's Semi-knocked-down packaged units save shipping costs and warehouse space.

Clip coupon and mail today.

THE AMERICAN PULLEY COMPANY
4294 Wissahickon Ave, Phila. 29, Pa.

Complete line of Pressed-Steel Hand Trucks • Steelite® Industrial Wheels • Drum King Hand Truck

Gentlemen:
Please send me more information on American Drum and Barrel Cradles.
Name _____
Firm Name _____
Address _____
City _____ Zone _____ State _____

▲ For more details circle **NED-2185** on enclosed inquiry slip ▲

FORGET THE OIL!

GAST rotary Oil-less AIR PUMPS never need it!

Below — Oil-less 3040, end plate removed. From 17 to 24 C.F.M.

Oil-less Model 1550 — 8 to 10.5 C.F.M.

SEE OUR CATALOG in SWEET'S FILE for PRODUCT DESIGNERS

Write for new Data Sheet on Oil-less Pumps, showing three types and rating tables.

THEY RUN ENTIRELY *without oil* in pumping chamber. Carbon rotor vanes lubricate themselves — through thousands of hours' use. Ball bearings grease-sealed for life. You can forget oiling problems!

DELIVERS ABSOLUTELY OIL-FREE AIR. Your product or material can't be contaminated with oil droplets.

FOR BOTH VACUUM AND PRESSURE, Gast Oil-less Models are precision-built for dependable high performance. Sizes from 3.5 to 24 C.F.M., 3 to 10 lbs. pressure, 10 to 20 in. vacuum.

Original Equipment Manufacturers for Over 25 Years

GAST ROTARY — AIR MOTORS · COMPRESSORS · VACUUM PUMPS (TO THREE H.P.) (TO 30 LBS.) (TO 28 INCHES)

GAST MANUFACTURING CORP., 115 Hinkley St., Benton Harbor, Mich.

▲ For more details circle **NED-2186** on enclosed inquiry slip ▲

HERE'S HELP

in finding their causes and cures!

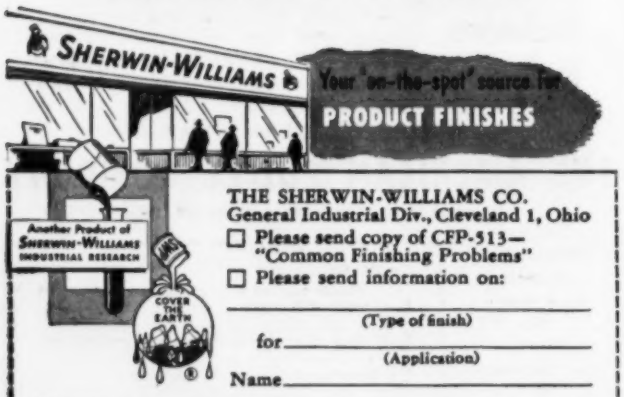
Bothered with sags . . . poor adhesion . . . improper drying . . . other product finishing difficulties?

This new Sherwin-Williams brochure offers a handy check list for determining causes and cures of most common finishing problems. It's part of the on-the-spot, local industrial service offered to manufacturers everywhere, through the Brown Label line of Sherwin-Williams Industrial Product finishes and Sherwin-Williams Branches.

These products include a complete line of quality industrial lacquers, enamels and specialty finishes for both wood and metal . . . baking and air-drying.

Check this handy local source for your requirements . . . ask your nearby Sherwin-Williams Branch for free copy of Brochure CFP-513 described here, or mail the coupon below.

SHERWIN-WILLIAMS INDUSTRIAL FINISHES



THE SHERWIN-WILLIAMS CO.
General Industrial Div., Cleveland 1, Ohio

☐ Please send copy of CFP-513— "Common Finishing Problems"

☐ Please send information on:

_____ (Type of finish)

for _____ (Application)

Name _____

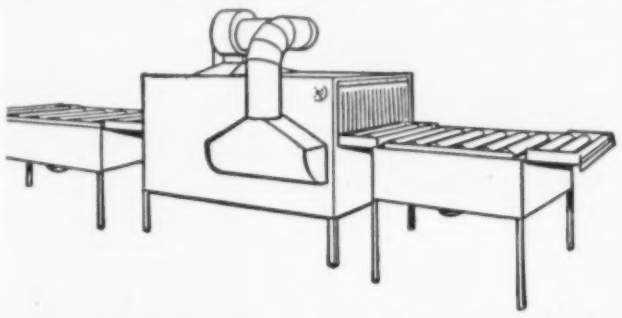
Company _____

Address _____

▲ For more details circle **NED-2187** on enclosed inquiry slip ▲

CLEANING-DRYING MACHINE parts processed on production basis

Combinations of metal parts washer, drying unit and coating machines can be connected by gravity, hand or power roller conveyors to handle wide range of metal

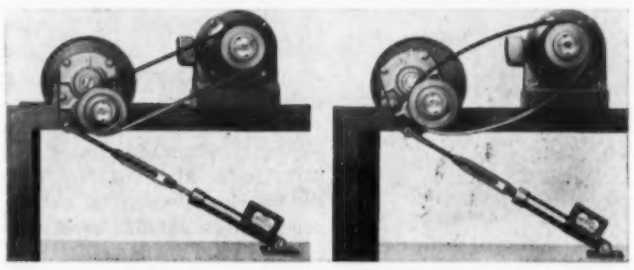


parts. Parts to be cleaned are placed in trays or wire baskets and roll into Super-Soak cleaning machine which "dunks" them into cleaning solution and provides agitating action to remove all contamination. After cleaning, parts are raised by machine to original level, and baskets are conveyed to next station which is hot air type dryer. Conveyor sections have trays to catch any drainings. After drying, parts can be conveyed to coating unit or to other station for next operation. Made by **Super-Soak Co.,** 3770-4 N. Pennsylvania Ave., Milwaukee 7, Wis.

▲ For more details circle **NED-2188** on enclosed inquiry slip ▲

OVERLOAD RELEASE for application to line of torque-arm speed reducers

Protection of driven machines, motors and speed reducers is realized by TriMatic overload release for Dodge Torque-Arm speed reducers which is also applicable to



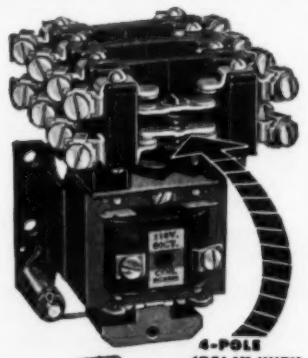
other uses where predetermined force or weight is required to initiate a specific function. Device operates both mechanically and electrically. Pressure exerted by excessive load causes shaft to move lengthwise through unit. This action loosens the belt, shuts off the current and activates a warning bell, siren or light through a 15-amp 115-v ac Micro Switch.

Release is calibrated for adjustment to load conditions of any job. Release can be set to act in tension or compression at any desired load up to reducer's maximum capacity. Pulling speed reducer back to normal position manually automatically resets overload release mechanism. Photo shows device set with belt tight (left) and tripped with belt loosened (right). Unit replaces standard torque arm furnished with speed reducer. It is offered in four sizes for single reduction reducer to 27 hp, with output from 115 to 330 rpm and in seven sizes in double reduction to 43 hp and output speeds of 12 to 110 rpm. Made by **Dodge Mfg. Corp.,** 600 S. Union St., Mishawaka, Ind.

▲ For more details circle **NED-2189** on enclosed inquiry slip ▲

Bulletin 700

UNIVERSAL SOLENOID RELAY



4-POLE RELAY WITH UNIVERSAL CONTACTS

Change from NORMALLY OPEN Contacts to NORMALLY CLOSED Contacts by Simply Shifting Connections

The Allen-Bradley Bulletin 700 universal solenoid relays are a new idea in relay design. The new dual contact arrangement permits quick change from normally open contacts to normally closed contacts by simply shifting connections . . . a simple and easy operation. Only ONE moving part. Rating of 10 amperes at voltages up to 600 volts. Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wisconsin.

ALLEN-BRADLEY QUALITY MOTOR CONTROL

▲ For more details circle **NED-2190** on enclosed inquiry slip ▲

SLY "ECONOMY" DUST FILTERS Small, Compact, Inexpensive

The Sly ECONOMY Dust Filter is especially suited for collecting the dust from individual machines or from a small group of dust points in close proximity to each other. It is compact yet it has an abundance of filter cloth which helps to maintain a uniform suction.

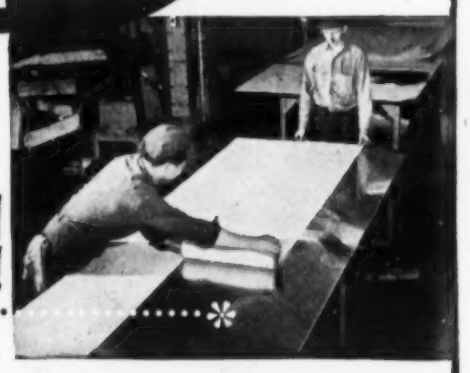
This filter offers: (1) *High Efficiency* with complete dust collection; (2) *Low Power,* a 3 HP motor will handle 1400 cu. ft. per minute, (3) *Long Life* because a very liberal amount of filter cloth is used; (4) *Compactness* because the filter cloth occupies a minimum of space; (5) *Effective Bag Cleaning* by means of a simple shaking device.

Made in four standard sizes, to filter dust out of 300 to 1400 cu. ft. air per minute. Write **The W. W. Sly Manufacturing Co.,** 4748 Train Avenue, Cleveland 2, Ohio. There are experienced Sly engineers in New York, Chicago, Philadelphia, Syracuse, Detroit, Buffalo, Cincinnati, St. Louis, Indianapolis, Birmingham, Los Angeles, Toronto. Advt.

▲ For more details circle **NED-2191** on enclosed inquiry slip ▲

Mystik Protecto-Mask

SAVE that polished surface!



Here's sure protection for those expensive, highly polished surfaces — stainless steel, aluminum, plastics, many more!

• Keep them protected during *fabrication, storage, in shipment.* • MYSTIK Protecto-Mask is *Self-Stik* . . . goes on easily from the roll to surface, peels off easily. Leaves no residue. • Protects against scratches, and production damage . . . cushions blows . . . shields against splatter from welding arc. Can be used for layout and diagramming.

Ask your supplier or write for full information and sample. Mystik Adhesive Products, 2657 N. Kildare, Chicago 39.

▲ For more details circle **NED-2192** on enclosed inquiry slip ▲

PROVIDING THE FASTEST, MOST ECONOMICAL METHOD KNOWN FOR CONNECTING AND DISCONNECTING PRESSURIZED FLUID-CARRYING LINES

Aeroquip

SELF-SEALING COUPLINGS

AEROQUIP CORPORATION
JACKSON, MICHIGAN

FLEXIBLE HOSE LINES; DETACHABLE, REUSABLE FITTINGS; SELF-SEALING COUPLINGS; "BREAKAWAY"; HYDRAULISCOPE

▲ For more details circle **NED-2193** on enclosed inquiry slip ▲

PORTELVATOR®

(THE HANDY HAMILTON PORTABLE ELEVATING TABLE)
LIFTS — LOWERS — LEVELS
TRANSPORTS

Eliminates "ganging-up" on heavy lifts. Reduces occurrence of industrial accidents. Eliminates the need for extra hands, extra trips.

STANDARD MODEL CAPACITIES TO 5000 POUNDS

SAFETY of OPERATION is inherent in the **PORTELVATOR** mechanical lift principle, which transmits power through worm, worm gear, and screw.

TAKE TIME TO LEARN THE DIFFERENCE
WRITE FOR BULLETIN P-508

THE Hamilton TOOL COMPANY
901 HANOVER STREET • HAMILTON • OHIO • U • S • A

For more details circle **NED-2194** on enclosed inquiry slip

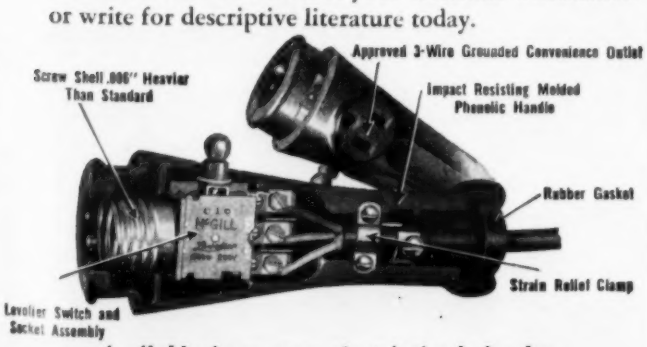
NEW *completely* grounded *portable lighting*

McGILL® 5000-G series 3-WIRE Portable Lamp Guards

Now you can have completely grounded portable lighting that complies with all Underwriters' Laboratories requirements for 3 wire grounded electrical systems in so many modern plants. In addition the new McGill 5000-G Series Lamp Guards offer industry the first fully grounded portable with an Approved 3 wire convenience outlet. Outlet design permits use of parallel blade plug as well as new grounding type with two parallel blades on a U shaped third blade. This provides a connection for grounding drills, saws or other power tools quickly at the working area — without extra extension cords.

The 5025-SLRG model has an impact resisting molded phenolic handle that is positively insulated. It is equipped with a lensed cage for illuminating otherwise inaccessible areas, a built in LEVOLIER switch and 16-3SJT red thermoplastic cord and new 3 blade grounding type plug. Available without cord and closed end cage as 5000-SG.

Select a suitable model at your electrical wholesalers or write for descriptive literature today.



Available from your electrical wholesaler

ONLY McGILL MAKES Levolier SWITCHES

McGILL® electrical specialties

McGill Manufacturing Co., Inc., 151 N. Campbell St., Valparaiso, Ind.

For more details circle **NED-2195** on enclosed inquiry slip

MOLDING & COATING RESIN handled with lightweight equipment

Formulation of Vinylite dispersion resins known as plastigels is easily molded, calendered, embossed, stamped and extruded and can be used for coating cloth and paper, or dip-coating of wire objects. It is particularly suited for floor tile, tubing, intricate electrical fittings, toys and novelties. Material resembles putty in raw state, is relatively stiff, but softens quickly at room temperature by stirring or kneading for easy forming by hand, molds or dies into complicated shapes. It then stiffens gradually, becomes self-supporting and can be baked to hard finished state within 15 minutes at 350° F without losing shape. Plastigels can be handled with lightweight equipment, and because of its low fusing temperature, ordinary ovens can be used. Photo shows dip-coating with plastigels used in beaker at the right. Developed by **Bakelite Co.**, Dept. NE, 122 E. 42nd St., New York 17, N. Y.

For more details circle **NED-2196** on enclosed inquiry slip

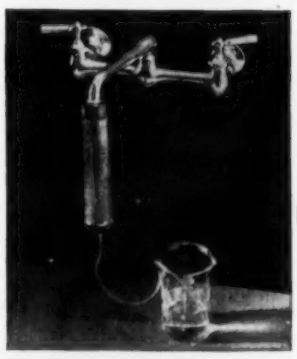
HIGH SPEED AUTOMATIC SCALE classifies, zones and check weighs articles weighing from 4 oz to 10 lb

Suited to check-weighing prefilled containers of material for underweight, overweight, or both, No. 9545 fully automatic scale can also be used to classify finished products into various weight groups or zones. Articles to be weighed and classified "on the run" are moved onto the scale approach belt by automatic conveyor. Indexing device at this point permits only one article to move onto weight belt at a time.

As article moves along belt, its weight causes an interceptor, with bar and slot arrangement, to pass in front of photoelectric cell. Articles of different weight cause varying number of bars and slots to pass in front of cell which transmits number to electronic counter. This unit activates solenoid that opens gate in distributing section corresponding with weight of article. Unit is custom built to meet specific requirements. It handles weights in 4-oz to 10-lb range, separating them into as many as eight different weight zones. Accuracy is within 0.2-per cent and speed is 60 to 100 articles per minute, depending upon size. Made by **Toledo Scale Co.**, Telegraph Rd., Toledo 1, O.

For more details circle **NED-2197** on enclosed inquiry slip

CHEMICALLY PURE WATER



from your faucet with the

LaMOTTE FILTR-ION

No installation necessary

Useful wherever chemically pure water is required, such as:

Photographic work
Storage batteries
Electric Steam Irons
Sterilizers
Analytical Procedures
Hydrogen-Ion Studies
Soil Testing
Blood Chemistry
Serology

2 models:

Model W—supplies up to 10 gallons on 1 charging, $3.85 each

Model W-D—supplies up to 20 gallons on 1 charging, $5.75 each. Both models may be recharged

(Refill package $3.50 each)

manufactured by

LaMOTTE CHEMICAL PRODUCTS CO.
Dept. NED Towson, Baltimore 4, Md.

makers of equipment & reagents for: pH control, Chlorine Control, Boiler Feed Water Control, control of Electroplating Baths and Cleaning Solutions, Soil Testing & Blood Chemistry.

For more details circle **NED-2198** on enclosed inquiry slip

● Cords, Ltd. engineers and builds standard and special cord sets for any application. Proved dependability.

Most comprehensive stock of moulds and dies in existence for production of electronic cords and assemblies.

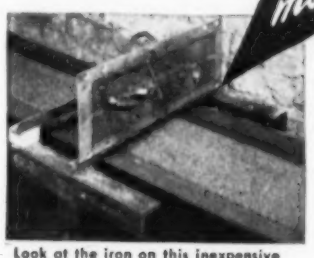
When you bring your cord problems to us you get the experience of the vast Essex Wire organization, plus integrated production of every component from wire bar to finished assembly. Write for details, explaining application.

WIRE SX PRODUCTS

CORDS LTD.
DIVISION ESSEX WIRE CORPORATION
121 DODGE STREET, DEKALB, ILLINOIS

For more details circle **NED-2199** on enclosed inquiry slip

How to guard machinery *magnetically*



Look at the iron on this inexpensive Dings PERMA-PLATE Magnet! It protects a set of $7,000 rolls. Bulletin on request.

The PERMA-PULLEY for *fully automatic* iron-removal Non-electric, no maintenance. Ask for Bulletin.

Protect crushers, grinders, pulverizers, stokers, screens, rolls, knives, pumps against tramp iron . . .

CHANCES are the cotton in your mattress passed over a Dings Magnetic Separator to remove stray iron that would otherwise wreck the bedding manufacturer's garnett rolls . . . your power company protects its coal pulverizers with these magnetic guardians to assure you 24-hour a day service.

Is your plant equipment as well protected? You can *guard it forever* against damage and down-time due to tramp iron with Dings new Alnico magnetic Perma-Pulleys and Perma-Plate Magnets . . . their magnetic permanence is *guaranteed for the mechanical life of the installation.*

Dings Certified MAGNETIC STRENGTH

DINGS MAGNETIC SEPARATOR COMPANY
4758 W. Electric Ave., Milwaukee 14, Wis.

For more details circle **NED-2200** on enclosed inquiry slip

TEMPILSTIKS°

the amazing Crayons that tell temperatures

in
WELDING
FLAME-CUTTING
TEMPERING
FORGING
CASTING
MOLDING
DRAWING
STRAIGHTENING
HEAT-TREATING
IN GENERAL

$2 each

gives up to 2000 readings

it's this simple:
- Select the **Tempilstik°** for your working temperature.
- Mark your workpiece with it.
- The **Tempilstik°** will leave a liquid mark as soon as its specified temperature is reached.

Available in these temperatures (°F)

113	213	313	450	850	1250	1650
125	225	325	500	900	1300	1700
138	238	338	550	950	1350	1750
150	250	350	600	1000	1400	1800
163	263	363	650	1050	1450	1850
175	275	375	700	1100	1500	1900
188	288	388	750	1150	1550	1950
200	300	400	800	1200	1600	2000

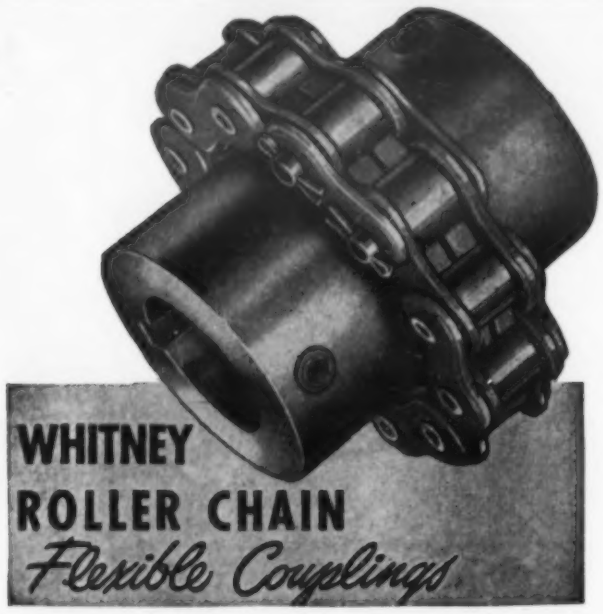
Also available in pellet and liquid form.

TEMPIL CORPORATION
132 W. 22nd St., New York 11, N. Y.

FREE—Tempil° "Basic Guide to Ferrous Metallurgy" —16½" by 21" plastic-laminated wall chart in color. Send for sample pellets, stating temperature of interest to you.

NAME _____
COMPANY _____
ADDRESS _____

For more details circle **NED-2201** on enclosed inquiry slip



FOR YOUR DIRECT POWER DRIVE APPLICATIONS

Whitney Roller Chain Flexible Couplings offer the equipment manufacturer and machine user a practical and efficient unit for connecting power equipment to direct drives. All steel construction . . . precision roller chain and hardened cut tooth sprockets provide positive operation . . . assure long life.

Check these Whitney Flexible Coupling features, easily installed, allows for motor end float, disconnects without removing shafts or bearings, allows for slight shaft misalignment.

You can use Whitney Flexible Couplings wherever a positive yet flexible direct drive is required. Write for information.

WHITNEY CHAIN COMPANY

203 Hamilton Street **Hartford 2, Conn.**

For more details circle NED-2202 on enclosed inquiry slip

TRIPLE-ACTION
WaterFOG Nozzles

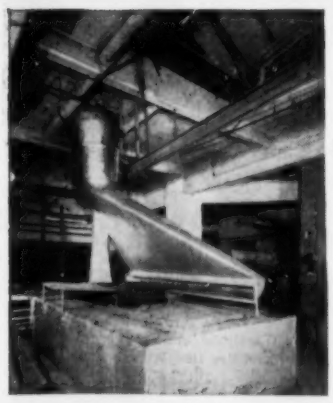
Rockwood *LIGHTweight* triple-action type SG-48 WaterFOG Nozzles are truly an all-purpose fire fighting tool for controlling and putting out fires in ordinary combustibles and flammable liquids. They use ordinary water and will discharge: 1. High velocity WaterFOG, 2. Straight water stream, 3. Low velocity WaterFOG from extension applicator. Protects operator from fumes and heat. Available in ¾" — 1" — 1½" — 2½" pipe sizes. Operates efficiently at 100 p.s.i. at the nozzle. Write for Bulletin C-501 R.

Approved by Underwriters' Laboratories, Inc. and Factory Mutual Laboratories.

ROCKWOOD SPRINKLER COMPANY
44 HARLOW ST. WORCESTER 5, MASS.

For more details circle NED-2203 on enclosed inquiry slip

in Cincinnati...



engineered air movement makes a big difference

A battery of galvanizing tanks in a Cincinnati plant was filling the air with noxious fumes and gases, even though the tanks were equipped with fan-powered canopies. Production, of course, was seriously reduced. Then the nearby Hartzell field engineer was called in. After studying the problem he prescribed a slot-type duct at the back of each tank, powered by a Hartzell ND28-6A-BDS duct fan. The fume problem was immediately cleared up.

Your air movement problems can be remedied just as easily. Simply call the Hartzell representative nearest you. He'll recommend the *right* fan or blower for your specific need.

(The installation described above was handled by the Hartzell Field Office at 2712 Erie Avenue, Cincinnati 8, Ohio. Telephone East 4463).

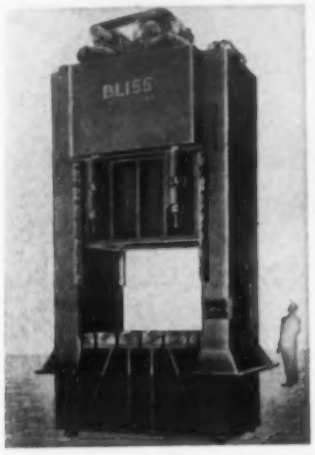
HARTZELL PROPELLER FAN CO.

DEPT. G DIV. OF CASTLE HILLS CORP. **PIQUA, OHIO**

engineering representatives in principal cities

For more details circle NED-2204 on enclosed inquiry slip

DRAWING PRESSES have quick advance and return speeds



Designed to produce large-area drawn stampings at production speeds, series of four-point double-action toggle drawing presses features quick advance and return speeds. Eddy current clutch provides quick approach to work, slowdown to give proper drawing speeds and quick return speed to top of stroke. Even with slow drawing speeds, rapid press cycle is possible. Three cross members in crown contain four totally enclosed gears with integral eccentrics for operating plunger slide. All gearing and toggle bearings inside crown are cascade-lubricated. Provision has been made for pneumatic die cushions in bed, or bed can be fitted with synchronized third motion. Presses are built in various sizes and widths. Made by **E. W. Bliss Co.**, 13-76 Raff Rd. S. W., Canton, O.

For more details circle NED-2205 on enclosed inquiry slip

ELECTRONIC GLUING UNIT causes fast wood glue setting

Glue used to hold plywood wall panels in place can be made to set almost instantly by portable high frequency gluing unit operating on 110 v. Device permits use of ¼-in. plywood paneling to achieve results comparing favorably with that previously possible only with ¾-in. material. "Spot weld" gluing method eliminates use of exposed surface nails and makes high quality joints. Welds can be applied wherever a nail or brad would customarily be used. Conventional plastic resin glues are used. Additional information from **United States Plywood Corp.**, 55 W. 44th St., New York 36, N. Y.

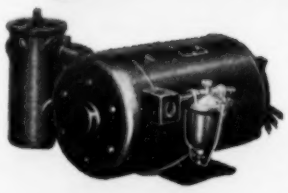
For more details circle NED-2206 on enclosed inquiry slip

DO YOU KNOW? A radically new lighting technique has been developed. By applying 360-cycle electric current to slimline fluorescent lamps instead of the conventional 60 cycles, an increase of 40 per cent in amount of light is reported. System uses a magnetic converter to step up the frequency. In the Dept. of Agriculture's Plant Industry station at Beltsville, Md., system is used to produce a level of illumination of over 2000 footcandles. Lamps provide all the light nourishment plants need for growing, without any of the harmful elements of sunlight. Developed by General Electric Co., Dept. 166-NED, Nela Park, Cleveland 12, O.

For more details circle NED-2207 on enclosed inquiry slip

no needless maintenance; no waste space because NO GEARS, NO BELTS, and NO EXTENDED DRIVES bother you in this compact

MOTOAIR* PUMP for VACUUM or PRESSURE



Integrally a part of its own motor, and but a few inches longer. Visible lubrication with no "discharge oil", this rotary type pump is available in four sizes with built-in exhaust air-filter. Operates with equal efficiency when ceiling, wall or normally mounted, and rotary blades compensate for their own wear.

*Reg. U. S. Pat. Off. 817

Designed for packaging, printing and paper handling machinery, laboratory use, tank evacuation, vacuum frames, etc. ***Ask for Catalog Details!***

NEW JERSEY MACHINE CORPORATION
1530 Willow Ave. • Hoboken, N. J.
Factory offices in Chicago, Cincinnati, Los Angeles

For more details circle NED-2208 on enclosed inquiry slip

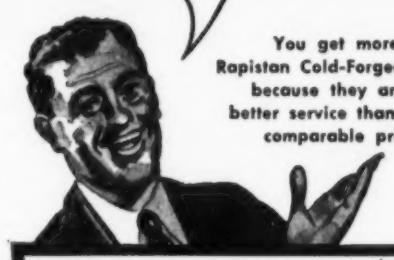
Let this all-purpose DEWALT save money in *Your* plant

Here is the ideal, all-purpose machine you need to cut costs and step up production in your plant. DeWalt is *many* machines in one! It dadoes, routs, shapes, tenons, grinds, sands, etc.! It's fast, accurate, safe, dependable. It takes up little floor space—and streamlines all your cutting operations. Write for catalog. DeWalt, Inc., Dept. NE-3, Fountain Ave., Lancaster, Pa.

DEWALT INC.
A subsidiary of American Machine and Foundry Co.

For more details circle NED-2209 on enclosed inquiry slip

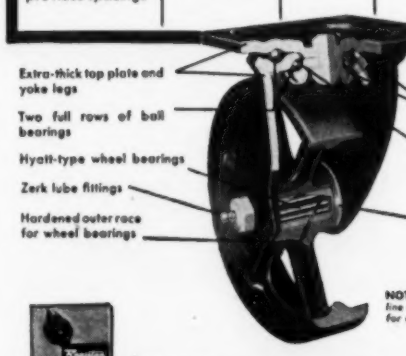
BETTER because they are BUILT to be better



You get more for your money with Rapistan Cold-Forged Industrial Casters because they are built to give longer, better service than any other caster of comparable price today.

HERE'S PROOF!

MAKE THESE COMPARISONS YOURSELF	RAPISTAN Cold-Forged Series 40	CASTER A	CASTER B	CASTER C
		Letters represent leading makes of stamped steel casters.		
Method of construction	Cold-Forged	Stamped	Stamped	Stamped
Thickness of top plate	1/4"	3/16"	3/16"	3/16"
Thickness of caster legs	3/16"	1/8"	1/8"	1/8"
Number of raceways—rows of ball bearings	2	2	2	2
Smoothness of raceways	.0007"	.0023"	.0030"	.0016"
		Figures represent degrees of roughness measured to .0001"		
Ball-bearing surface contacting top plate raceway	.120"	.005"	.030"	.030"
Ball-bearing surface contacting yoke raceway	.100"	.070"	.030"	.005"
Protection between wheel-hub and yoke leg	Case hardened, thrust washer	None	None	None
Shape of bolt hole for use with previous spacings	Slotted for flexibility	Round	Round	Round



NOTE: Rapistan also makes a complete line of outstanding steel forged casters for unusually heavy work.

FOR YOU . . . Illustrated catalog with specifications on Cold-Forged casters and information on our complete line of casters and hand trucks. Write today.

Rapistan®
FASTEST GROWING NAME IN CASTERS

The RAPIDS-STANDARD CO., Inc., 755 Rapistan Bldg., Grand Rapids, Michigan

For more details circle NED-2210 on enclosed inquiry slip

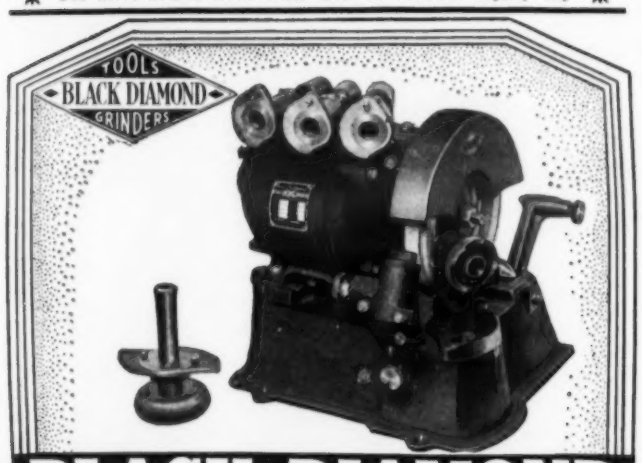
NEW composite catalogue american air filters

For engineers or executives responsible for selection or application of air filters. Thirty-two pages includes basic information on 15 filter types with engineering data, dimension and capacity charts, tables, and installation—maintenance section. Liberally illustrated and has special index for ready reference. Write today for this comprehensive Bulletin No. 510.

AAF American Air Filter COMPANY, INC.

391 Central Avenue, Louisville 8, Ky.
American Air Filter of Canada, Ltd., Montreal, P. Q.
Pacific Division Office, San Francisco, Cal.

▲ For more details circle **NED-2211** on enclosed inquiry slip ▲



BLACK DIAMOND
PRECISION DRILL GRINDER

FOR PRECISION SHARPENING OF ALL SMALL DRILLS—TO REDUCE DRILLING COSTS, DRILL BREAKAGE AND WORK REJECTS AND TO CONSERVE SKILLED LABOR—YOU SHOULD OWN A BLACK DIAMOND

Black Diamond Grinders cut 50% and more on drill sharpening and drilling costs. They sharpen small drills so efficiently and accurately that drill breakage and work spoilage are tremendously reduced.

Anyone can operate a Black Diamond, can keep all small drills sharp—and true centered with smooth lips accurately ground to the same length, correct angle and clearance for fast, precision drilling.

The built-in Diamond Point Dresser, is instantly available to keep the grinding wheel sharp cutting and the Web Thinning Attachment cares for all types of Notched Points.

If you use small drills, singly or in gangs, this moderately priced grinder will keep any quantity sharp, always ready for use. You should own a Black Diamond. Write for New Bulletin.

BLACK DIAMOND SAW & MACHINE WORKS, INC.
NATICK, MASSACHUSETTS

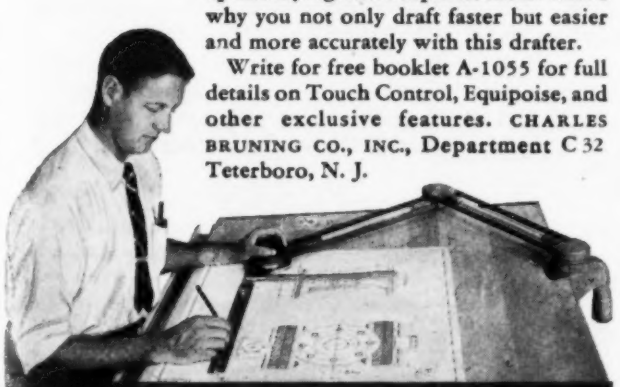
▲ For more details circle **NED-2212** on enclosed inquiry slip ▲

DRAFT 40% FASTER with a Bruning Machine

Tests prove you draft as much as 40% faster with a Bruning machine that combines your five basic instruments . . . T-square, straightedge, triangle, protractor, and scales . . . into one precision unit.

There are no waste motions of picking up and laying down separate tools. That's why you not only draft faster but easier and more accurately with this drafter.

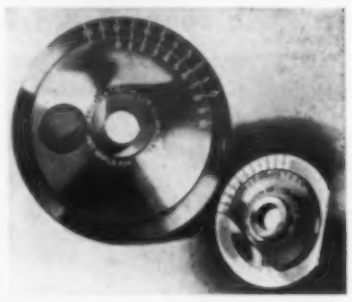
Write for free booklet A-1055 for full details on Touch Control, Equipoise, and other exclusive features. CHARLES BRUNING CO., INC., Department C 32 Teterboro, N. J.



BRUNING
Everything for the Engineer and Draftsman

▲ For more details circle **NED-2213** on enclosed inquiry slip ▲

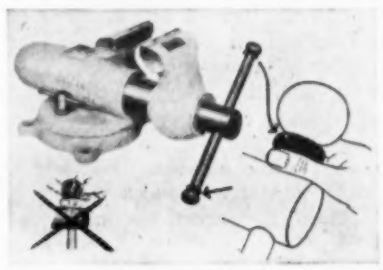
ADJUSTABLE BALANCING DISK for grinding or polishing wheels



Grinding, polishing or buffing wheels can be brought into balance quickly with the Speedi-Balancer which can be removed and replaced without adding or removing weights. Wheel is marked showing setting of balancer disks, and any time wheel is removed or replaced on lathe, balancer is set according to required marking. Balancers are made in two sizes, the smaller size No. 10 to fit arbors from ½ to ⅞ in. while larger No. 15 fits 1 to 1¼-in. arbors. Made by **Anderson Bros. Mfg. Co.,** 1901 Kishwaukee St., Rockford, Ill.

▲ For more details circle **NED-2214** on enclosed inquiry slip ▲

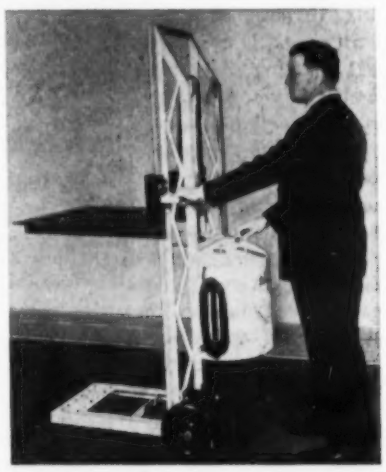
SWIVEL VISE features shockproof safety handle



Improvement incorporated in this swivel base vise is shockproof safety handle. Oil resistant rubber rings mounted up against handle knobs prevent pinching of fingers or hand and reduce noise and jarring. Rings force flesh away from handle. Handle is standard on vises with 3½-in. and larger jaws which are reversible. Made by **Wilton Tool Mfg. Co.,** Dept. NED, 925 Wrightwood Ave., Chicago 14, Ill.

▲ For more details circle **NED-2215** on enclosed inquiry slip ▲

INDUSTRIAL LIFT TRUCKS lift 800-lb loads up to 78 in. high

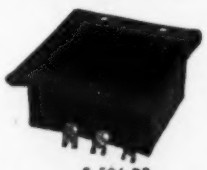


Four models of the Big Joe lift trucks will lift 800 lb loads to heights of 52, 66 and 78 in. with the 52-in. lifts being made for both foot and electric-hydraulic operation. Each truck is equipped with special heavy-duty recharging system. Shock-proof power system is controlled by key-locked ignition to prevent unauthorized use of truck. Dual ball and roller bearings are used thoughout for smooth operation even under capacity loads, and self-adjusting foot operated dual safety brakes are standard equipment. Made by **Big Joe Mfg. Co.,** Dept. N-301, 184 N. Franklin St., Chicago 6, Ill.

▲ For more details circle **NED-2216** on enclosed inquiry slip ▲

For HEAVY DUTY WORK! Severest Electrical Services

P-506-CE—Plug with Cap



S-506-DB
Socket with deep Bracket

JONES PLUGS & SOCKETS
500 SERIES
Proven Quality!

For 5,000 Volts, 25 Amperes per Contact Alterable by circuit Characteristics.

Socket contacts of phosphor bronze, knife-switch type, cadmium plated. Plug contacts hard brass, cadmium plated. Made in 2, 4, 6, 8, 10, and 12 contacts. Plugs and sockets polarized. Long leakage path from terminal, and terminal to ground. Caps and brackets, steel parkerized (*rust-proofed*). Plug and socket blocks interchangeable in caps and brackets. Terminal connections most accessible. Cap insulated with canvas bakelite.

Write for Jones BULLETIN 500 for full details on line.

Jones
HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

▲ For more details circle **NED-2217** on enclosed inquiry slip ▲

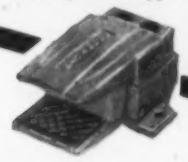
Positive Air Control with HANNIFIN VALVES

for single or double-acting cylinders

Hannifin precision-built valves are efficient and *reliable*—and quickly *available!* For positive, accurate control of air-powered equipment, there is a Hannifin valve that will give long-time service in production operations.

"Packless" Rotary Disc Type

Hand operated. Simple design avoids leakage, waste of power—gives positive control. Sizes ⅛" to 1¼".
Also foot-operated types—leave operator's hands free. Sizes, ¼" to ¾".



"Effortless" Sliding Disc Type

Foot operated. Fast, effortless action. Pilot operated, air pressure does the work.
Also finger-tip actuated models.

Write for Bulletins 57, 240, 241

HANNIFIN

Hannifin Corporation • 1127 S. Kilbourn Ave. • Chicago 24, Illinois

▲ For more details circle **NED-2218** on enclosed inquiry slip ▲

★ The FLEXROCK Product-of-the-Month: **FLEXTITE!**

R. J. Reynolds Tobacco Company.

WINSTON-SALEM, N. C.
Another Leading Manufacturer Using

FLEXTITE

for stopping leaks, making walls damp-resistant

R. J. Reynolds Tobacco Company, makers of CAMELS, one of America's five leading brands of cigarettes, has used Flextite successfully for years to stop both direct leaks and seepage in concrete walls.

Flextite is a unique liquid chemical used to mix cement or cement and sand. The resulting Flextite mortar *stops direct leaks almost instantly, even against hydrostatic pressure* . . . in elevator pits, concrete pipe, dams, reservoirs. Working equally well on concrete, masonry or brick, Flextite mortar is also ideal as a water-resistant plaster coat which converts wet, damp basements, pits, etc. into useful, bone-dry storage or work spaces. So if you're troubled with moisture, seepage or direct leaks, investigate economical, easy-to-use Flextite. For trial offer, mail the coupon now.

To stop direct leaks, first chip out hole "V"-shaped (or chip "V" channel entire length of crack).

Mix Flextite, undiluted, with fresh, neat Portland Cement. Form into "carrot" shape.

Force "carrot" into hole against water pressure; hold for 3-4 minutes. Finish off with Flextite-cement-sand mix.

Flexrock products for maintenance include

- Floor Resurfacing Materials
- Floor Patching Materials
- Floor Coatings and Preservatives
- Wall and Floor Cleaners
- Water-proofing and Moisture-proofing Compounds
- Roof Patching and Reconditioning Materials
- Concrete Admixtures

FLEXROCK COMPANY
PHILADELPHIA 4, PA.

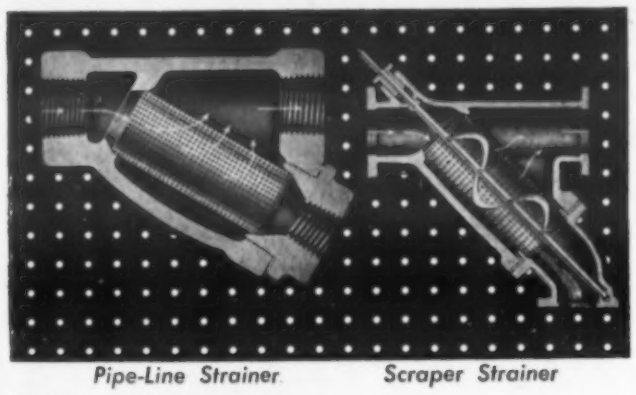
FLEXROCK COMPANY
Building Maintenance Division
3603 Filbert Street, Philadelphia 4, Pa.

Please send me complete information on Flextite, with details of the Trial Order Plan. ( ) Include also the Handbook of Building Maintenance. ( )

Name _____
Title _____
Company _____
Address _____

Please clip coupon to Company letterhead.

▲ For more details circle **NED-2219** on enclosed inquiry slip ▲



Pipe-Line Strainer Scraper Strainer

Strainers protect steam traps, regulating and reducing valves, pumps, meters or nozzles. Also, keep impurities out of fluids of all kinds. Available with scrapers for operation without interruptions for cleaning screens. Catalog Nos. 1200 and 1225.

SARCO PIPE LINE STRAINERS

293

SARCO SAVES STEAM

SARCO COMPANY, INC.
Represented in Principal Cities
Empire State Building, New York 1, N. Y.
SARCO CANADA, LTD., TORONTO 5, ONTARIO

IMPROVES PRODUCT QUALITY AND OUTPUT

For more details circle NED-2220 on enclosed inquiry slip

with a MILWAUKEE BRIQUETTING PRESS

Conserve critical metals . . . decrease scrap handling costs . . . save storage space with the MILWAUKEE Briquetting Press. It automatically converts low-grade bulk metal turnings, borings, chips and shavings into dense cylindrical briquettes which are suitable for direct charging into furnace or foundry cupola as high-grade scrap. In many plants, savings pay for press in less than one year.

Write today for Bulletin No. 117 for complete details.

385-SI

SPO MILWAUKEE Foundry Equipment Division
6475 Grand Division Ave. • Cleveland 25, Ohio

For more details circle NED-2221 on enclosed inquiry slip

"HELP ON WHEELS"!

LATEST DICO'S Free CATALOG EDITION

. . Sure, Speedy HELP On Your WHEEL PROBLEMS

You'll get lots of HELP from the Latest Edition of DICO's Wheel Catalog.

It is loaded with uniquely simplified answers to high speed and low speed wheel engineering problems.

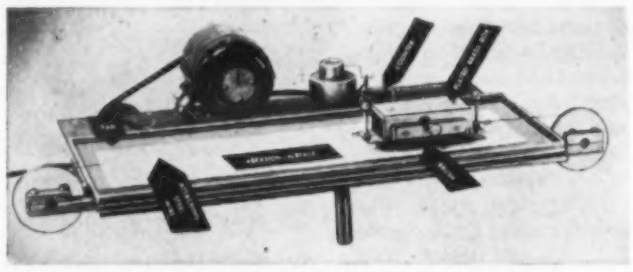
A modern line of industrial wheels 6"—22" rubber diameter.

DICO COMPANY Write TODAY! 206 S.W. 16th ST., DES MOINES, IOWA

For more details circle NED-2222 on enclosed inquiry slip

WASHABILITY-ABRASION TESTER for finishes, surfaces and materials has controlled friction and time

Paints, varnishes, lacquers, linoleum, waxes and other products and surfaces can be checked for washability or wet or dry abrasion with this model 105 testing machine.



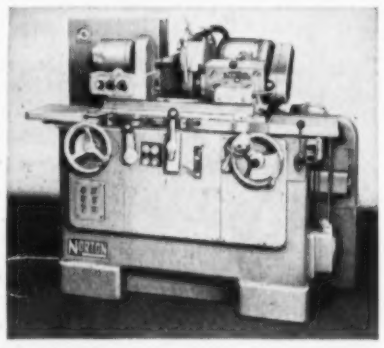
It furnishes basis for positive precision-controlled friction, physical and time data. Finishes on materials such as wood, metal, glass, paper, foil and plastics can be tested.

Test panels are clamped on table or placed in table pan. Reciprocating bristle brush is driven by 110-v 60-cycle motor over 13-in. back-and-forth travel, and number of complete oscillations is recorded on counter. Speed of brush is approximately 37 oscillations per minute. Test can be run with water or specified soap solution, and sponge or flannel cotton padding can be substituted for brush.

For wet or dry abrasion testing, abrasion boat which is fitted with abrasive cloth and any required weight is substituted for brush. Load is varied by using required number of weights. Made by **Henry A. Gardner Laboratory, Inc.**, 4724 Elm St., Bethesda 14, Md.

For more details circle NED-2223 on enclosed inquiry slip

CYLINDRICAL GRINDING MACHINE in plain or semiautomatic models for 12 or 18-in. work length capacities



Work length capacities of either 12 or 18 in. are handled by 4-in. type CTU cylindrical grinding machines available for either plain or semiautomatic operation. Graduated wheel-feed handwheel simplifies job setup and indicates feed as handwheel is rotated past fixed pointer. Fine feed settings are made by feel through click-count indexing mechanism on handwheel. Each click represents setting for 0.0001-in. work diameter reduction.

Grinding and truing table speeds are independently adjustable by positioning of table start-stop lever. Selector switch gives either automatic or manual control of work rotation and coolant flow. In addition to features mentioned, semiautomatic version of grinder provides automatic, adjustable grinding cycle controlled by single lever. Pumps, motors, filters and relief valves are located on outside to ease maintenance. Made by **Norton Co.**, 200 New Bond St., Worcester 6, Mass.

For more details circle NED-2224 on enclosed inquiry slip

THIS FILE IS NOT Confidential

use it to

WAGE WAR ON WASTE

Yours for the asking is this wealth of valuable lighting information:

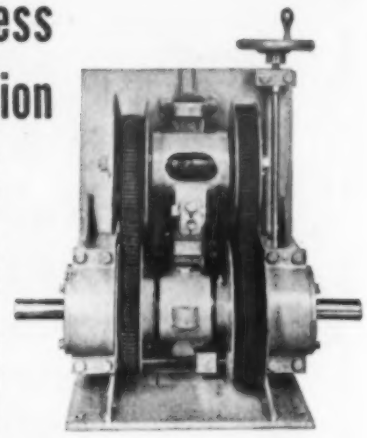
1. CHAMPION'S PLANNED CLEANING PROGRAM—designed to restore and maintain normal lighting efficiency and economy, year in and year out.
2. CHAMPION'S FLUORESCENT LAMP GROUP REPLACEMENT PLAN — engineered for the systematic replacement of lamps without interrupting Productivity. Saves an average of 60% in labor time, labor costs alone.
3. CHAMPION'S INCANDESCENT LAMP GROUP REPLACEMENT PLAN — worked out to give you all the advantages of the Fluorescent "GR" Plan, with even greater savings.

All 3 Plans, complete with formulas, charts and practical examples, may be conveniently filed for permanent reference in Champion's "War on Waste" Folder. It is offered without cost or obligation to lighting engineers and maintenance men in factories and offices, etc.

CHAMPION LAMP WORKS
Lynn, Massachusetts
A DIVISION OF CONSOLIDATED ELECTRIC LAMP CO.

For more details circle NED-2225 on enclosed inquiry slip

Wider Stepless Speed Variation with less belt replacement



Now you can get instantaneous stepless speed control in minimum space and with assurance of minimum belt replacement.

The new Worthington ALLSPEED DRIVE uses a *tandem belt* arrangement rather than a single belt. Result—a wider range of speed variation, less belt wear (narrower belts mean less flexing and compression).

Sizes from 1-15 hp; up to 16-1 variation. Upright or horizontal frame. With built-in motor—or to be driven by belt, chain or gears.

Write for Bulletins: AS-1600-B3 and B4. Worthington Pump and Machinery Corporation, Allspeed Drive Sales Division, Holyoke, Massachusetts.

WORTHINGTON

AS.1.5

For more details circle NED-2226 on enclosed inquiry slip

PUT THIS 52-PAGE CATALOG TO WORK FOR YOU

Shows how to cut costs with unique thermostat . . . gives detailed explanation of installations . . . pictures wide variety of applications . . . a *fact-filled* guide.

Send today for your copy of this 52-page catalog on Fenwal THERMOSWITCH thermostats.

Learn how you, too, can cut costs in controlling humidity, radiant heat, pressure, vapor level, or other variables dependent on temperature.

Catalog gives complete explanation of the unique operating principle of Fenwal controls. Includes schematic diagrams — detailed breakdown of specific features — instructions on checking system under operating conditions — an entire section on selection and application of THERMOSWITCH controls.

Detailed specifications on all Fenwal products include modifications, special features, exact installation instructions with diagrams on installation — plus photographs of installations illustrating wide variety of applications.

You will find the Fenwal Catalog #400 a gold mine of helpful information. For your free copy, simply write Fenwal, Incorporated, 83 Pleasant Street, Ashland, Massachusetts.

Fenwal

THERMOSWITCH®

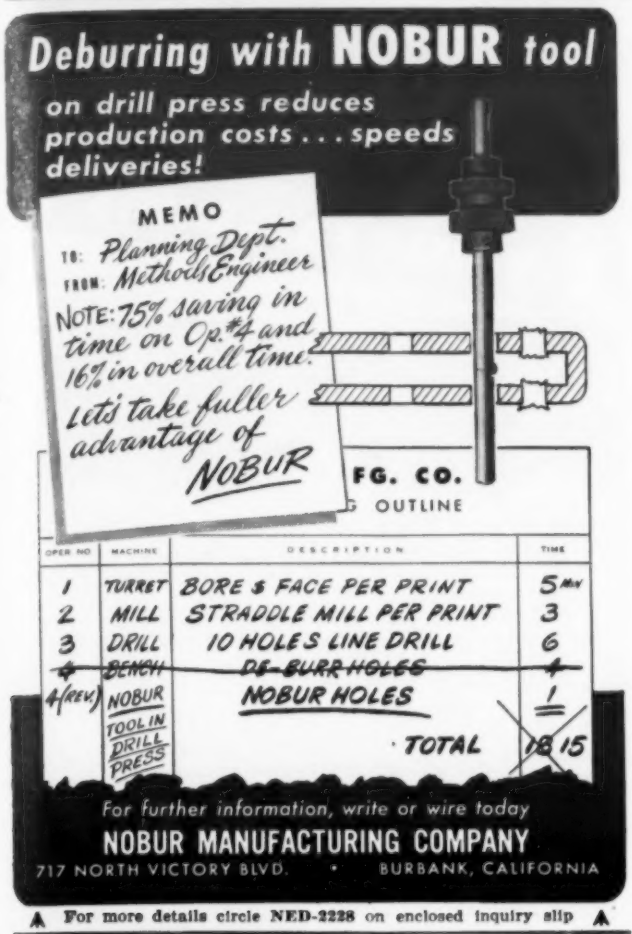
Electric Temperature Control and Detection Devices

SENSITIVE...*but only to heat*

For more details circle NED-2227 on enclosed inquiry slip

Deburring with NOBUR tool

on drill press reduces production costs . . . speeds deliveries!



For further information, write or wire today

NOBUR MANUFACTURING COMPANY

717 NORTH VICTORY BLVD. • BURBANK, CALIFORNIA

For more details circle NED-2228 on enclosed inquiry slip

CONVEYOR BELT SYSTEM

belt turnover prevents frozen or sticky material from clogging idlers

Year-around conveying of such products as iron ore is possible with belt conveyor system that enables belt to turn itself over after delivering its load. Thus, the clean side of the belt always runs on top of the return idlers and cannot cause damaging build up of tacky materials nor clog idlers or pulleys. Before accepting a new load, belt takes another 180-degree twist so that the same carrying surface always receives the load. Clean-up problems are lessened, and need for deck-plates to protect return run is eliminated. Any spillage onto lower run is carried to the tail end and is dumped automatically for subsequent reclaiming.

System is recommended for use wherever messy, sticky materials must be handled, such as phosphates, raw sugar, lignite, as well as corrosives such as salt, fertilizers and sulphur which attack the metallic understructure and return idlers of the belt conveyor system. System is now being used to handle iron ore throughout the year. Ore can be conveyed even at temperatures as low as −40° F. Developed in conjunction with Chain Belt Co. by **B. F. Goodrich Co.**, Dept. E, 500 S. Main St., Akron 18, O.

For more details circle NED-2231 on enclosed inquiry slip

HANSEN - the Tacker with 1001 Uses

BOAT seats and life-preserver units shown being assembled with the Hansen Model T-2 Tacker — for Lee L. Woodard Sons Co., furniture manufacturers, Owosso, Mich.

Besides providing neater, longer-holding seat covers, the Hansen Tacker saves 6¢ per seat cover over former methods.

Balanced design; quick, easy action and other features make Hansen the *preferred* Tacker. Submit sample or sketch, with details of your problem.

A.L. HANSEN MFG. CO.

5164 RAVENSWOOD AVE.
CHICAGO 40, ILL.

For more details circle NED-2234 on enclosed inquiry slip

MOTOR-DRIVEN CONTROLLED VOLUME PUMPS

Facts are in this Bulletin. Facts about Milton Roy *Motor-Driven* Controlled Volume Pumps. These facts will be of value to plant men faced with the need of pumping liquids in controlled volume.

Bulletin No. 251 is 24 pages long, in 2-colors, and contains illustrations showing the standard Milton Roy Motor-Driven Controlled Volume Pumps as well as models designed for special applications. Bulletin No. 251 describes in detail how pump capacity can be regulated by plunger speed and plunger stroke adjustments. Capacity pressure selection tables are included.

There's a wealth of information here. Important information, too. Write today for Milton Roy Bulletin No. 251.

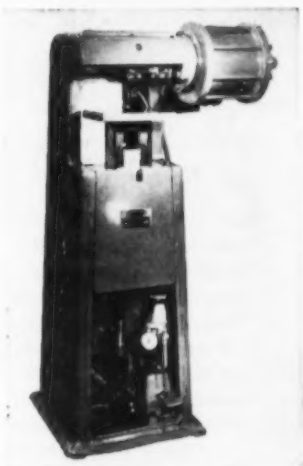
MILTON ROY COMPANY

1304 E. MERMAID LANE • PHILADELPHIA 18, PA.

For more details circle NED-2229 on enclosed inquiry slip

MARKING MACHINE

reciprocating head pneumatic type has provision for extra deep marks



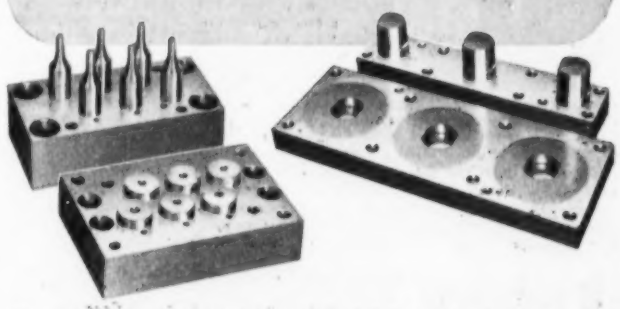
Designed to impress an extra deep mark on tough metal surfaces without exerting extreme pressures or imparting shock to parts being marked and to dies, No. 204-CR fully pneumatic marking machine is of reciprocating head type. Application can also be to parts that will not withstand necessary pressure required to make mark in one pass. Machine automatically passes the marking die back and forth on part being marked, this operation continuing until foot pedal control is released.

To compensate for additional depth of the mark with each stroke of head, elevating table holding the part is kept under constant "air cushion" which is adjustable up to 6000 lb maximum pressure. Reciprocating operation can be cut out, the machine then functioning in the manner of other No. 204 models with single stroke marking. Both round and flat parts can be marked. Made by **Jas. H. Matthews & Co.**, 3943 Forbes St., Pittsburgh 13, Pa.

For more details circle NED-2232 on enclosed inquiry slip

SLASH SKILLED MAN HOURS

SPECIAL RETAINER PLATES



You can gain all the advantages of R-B standard punches and dies on those jobs where small center to center hole spacing in work precludes the use of standard individual R-B retainer plates. For, R-B will make special retainer plates holding multiple punches and dies according to your specifications.

Each special R-B retainer plate is made from tool steel and is precision ground after hardening. They will hold as many interchangeable R-B punches and dies as your operation requires. Ball locks are built into these special plates at designated locations providing the same radial and vertical locking feature found in standard R-B retainers.

The use of multiple hole retainer plates saves you skilled man hours in die construction and maintenance. Result—more work completed each day by your skilled men and increased production profits for you.

Get the Whole Story

ALLIED PRODUCTS CORPORATION
RICHARD BROTHERS DIVISION
Dept. 62 • 12629 Burt Rd., Detroit 23, Mich.

Please send me your 52-page free catalog.

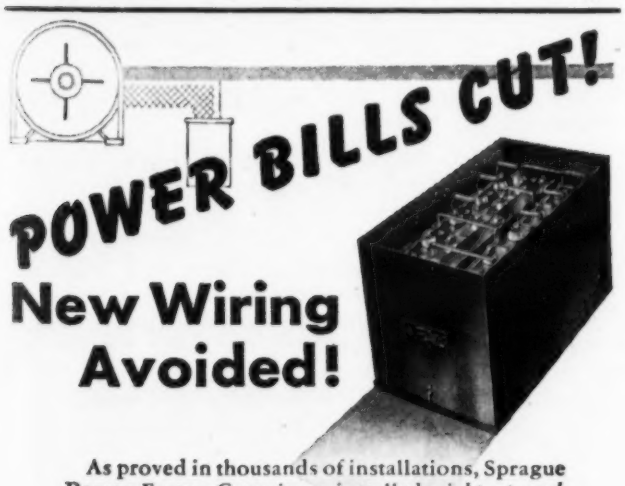
NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

Also Produced in Allied's Four Plants . . .
HARDENED AND PRECISION GROUND PARTS • STANDARD CAP SCREWS • SPECIAL COLD FORGED PARTS • SHEET METAL DIES • ALLITE DIES CAST OF ZINC ALLOY • JIGS • FIXTURES

For more details circle NED-2235 on enclosed inquiry slip

POWER BILLS CUT!

New Wiring Avoided!



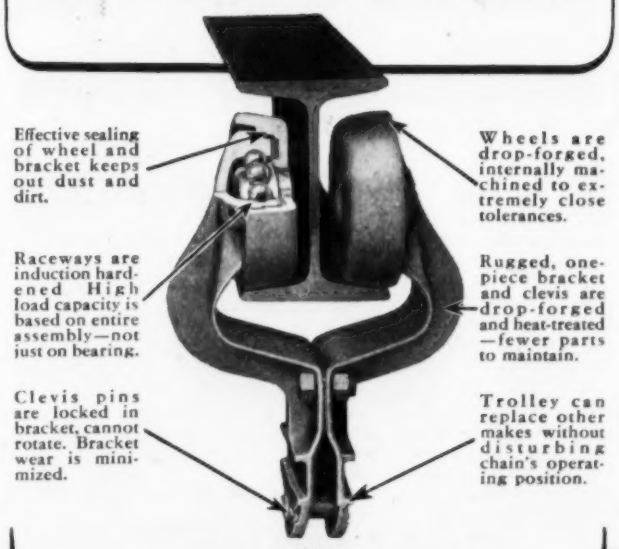
As proved in thousands of installations, Sprague Power Factor Capacitors installed *right at each piece of inductive electrical equipment* insure maximum power cost savings, guarantee maximum cost-saving flexibility for future moves and expansion. Power factor on each piece of equipment is corrected *to the maximum*. Changes or additions can be made as *they are required*. New wiring, new switch gear, new transformers can be avoided. *Existing electrical circuits can handle bigger loads.*

Write for 28-page POWER FACTOR CORRECTION GUIDE
SPRAGUE ELECTRIC COMPANY, North Adams, Mass.

SPRAGUE POWER FACTOR CAPACITORS

For more details circle NED-2230 on enclosed inquiry slip

Your conveyor dollars go farther with LINK-BELT trolleys



LINK-BELT

LINK-BELT COMPANY: Chicago 8, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8. 12,385

Write for Folder 2241-B.

For more details circle NED-2233 on enclosed inquiry slip

THIS Hopper Assures Dependable Material Flow because...

Model V-60 Semi-Noiseless Vibrator eliminates material arching and plugging in hopper... saves time and equipment.

... its equipped with a

SYNTRON

ELECTRIC VIBRATOR

With Variable Control of Power

3600 controllable vibrations per minute keep even the most stubborn materials flowing freely thru bins, hoppers, chutes and screens ... of any size ... WITHOUT THE HAMMERING AND RODDING AND POKING THAT WASTES MANPOWER AND DAMAGES EQUIPMENT.

Write for FREE Illustrated Folder

405 Lexington Ave. Homer City, Pa.

SYNTRON CO.

For more details circle NED-2236 on enclosed inquiry slip

KLIXON PROTECTORS

HELP KEEP MOTORS ALIVE in all types of equipment

Manufacturers of all types of motor-driven equipment can eliminate motor burnouts headaches by specifying and using motors with built-in Klixon protectors.

Built into the motor by the motor manufacturer, a Klixon protector provides positive protection against overheating and burning out. Should the motor stall or a dangerous overload occur, the protector automatically cuts the power "off". When it cools to safety, it snaps the power "on" again, either by pushing the red button or automatically depending on the type of protector used.

The extra cost for this protection is low, pays dividends by building customer goodwill, eliminating motor burnouts, repairs and replacements.

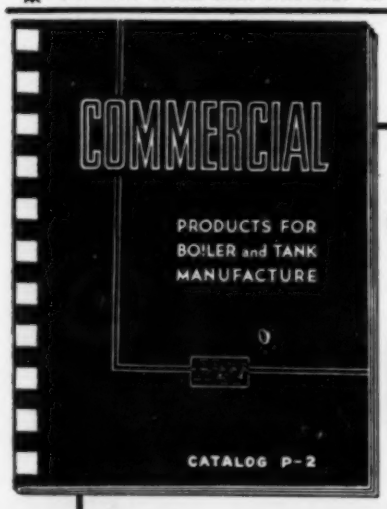
Remember, all motors do not come protected ... and the only way to be sure that your motors are equipped with Klixon protectors is to specify on your purchase orders "Motors with Klixon protectors."

KLIXON SPENCER THERMOSTAT

Division of Metals & Controls Corp.

1903 FOREST ST., ATTLEBORO, MASS.

For more details circle NED-2237 on enclosed inquiry slip



TANK HEAD Catalog by "COMMERCIAL"

Ready for You NOW!

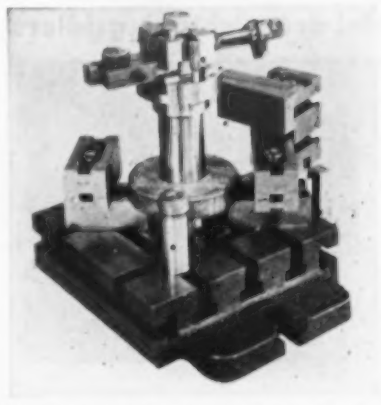
WRITE FOR IT

THE COMMERCIAL SHEARING AND STAMPING CO.

P. O. BOX 719 YOUNGSTOWN 1, OHIO

For more details circle NED-2238 on enclosed inquiry slip

JIG & FIXTURE SYSTEM components available in two sizes



Wharton universal jig and fixture system consists of graduated elements with bases and fastening devices which, when assembled, will make jigs and fixtures for machining details or assembling parts for almost any job. No. 1 basic outfit is for small production and experimental work, while No. 3 basic outfit is for large scale production. System is designed for close tolerance precision machining operations and provides accuracy, rigidity and speed in jig or fixture building It incorporates elements which permit circular indexing table to be used for erection of universal jig. Available from **Wharton & Wilcocks of America, Inc.**, Dept. G, 17 Battery Pl., New York 4, N. Y.

For more details circle NED-2239 on enclosed inquiry slip

SELENIUM RECTIFIERS cell diameters range from 0.060-in.

Miniature Microstak line of hermetically sealed selenium rectifiers is available with cell sizes as small as 0.060-in. and in wide range of current and voltage ratings. Seal is metallized glass-to-metal, assuring stable operation in high humidity, dust, corrosive fumes and changing pressures. Units can be used in digital and analog computers, hearing aids, airborne radar, CRT bias supplies and other advanced electronic circuits. Made by **International Resistance Co.**, Special Products Div., 409 N. Broad St., Philadelphia 8, Pa.

For more details circle NED-2240 on enclosed inquiry slip

CONNECTOR HOOKS join by simple turn of fingers

A simple and quick means for instantly attaching or detaching rope, wire rope or chain lines to each other or to stationary objects is provided by corrosion resistant manganese bronze quick - connectors. Hooks join or detach by simple turn of the fingers and cannot come apart until intentionally disconnected. Featherlight aluminum base Ternalloy units are available. All sizes and types of fast or fixed eye hooks, swivel hooks, fixed jaw hooks, floor or platform fittings and bolt hooks are offered. They have high safety factor above their rated safe working load. Made by **Brummel Hook Co.**, 1617 Winona Ave., Chicago 40, Ill.

For more details circle NED-2241 on enclosed inquiry slip

Modern way to save money ... Farquhar medium duty PACKAGE CONVEYOR

Cuts COSTS Boosts PROFITS

IF you're looking for an easier, faster, *cheaper* way to move bags, bales, boxes, cartons and bundles up to 75 pounds, get this Farquhar Model 436 Package Conveyor on the job and watch your handling costs hit rock bottom!

The Farquhar Model 436 is especially designed for all types of portable or semi-permanent materials handling installations. Heavy, two-ply rubber covered belt is 12" wide, carries units up to 75 pounds at standard speed of 78 feet per minute. Belt is supplied with or without cleats. Standard center support provides great stability, may be attached to floor or hung from ceiling. Minimum length 14 ft., maximum 32 ft

For information on this money-saving Farquhar Model 436 Conveyor — or other Farquhar Conveyors for *all* bulk and packaged materials handling—write to:

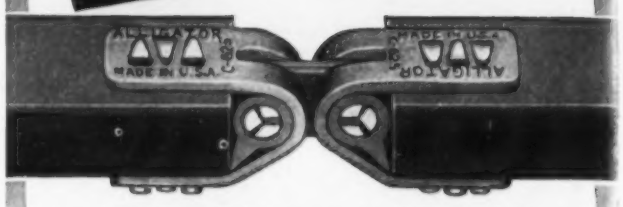
A. B. FARQUHAR COMPANY, Conveyor Div., Dept. M-04, 142 N. Duke St., York, Pa., or 618 W. Elm St., Chicago, Ill.

Farquhar CONVEYORS SAVE YOU MONEY

HYDRAULIC PRESSES • FARM EQUIPMENT • FOOD PROCESSING AND SPECIAL MACHINERY

For more details circle NED-2242 on enclosed inquiry slip

Now you can fasten V-belts by using ALLIGATOR V-BELT FASTENERS



● Alligator V-Belt Fasteners and open-end (long length) V-belting in rolls will enable you to make up multiple V-belt drives for a wide variety of applications.

Available for B, C and D sizes of V-belting.

Not to be used for repairing endless cord V-belts.

Bulletin V-211 will give you complete details. A copy mailed on request.

Order from your supply house

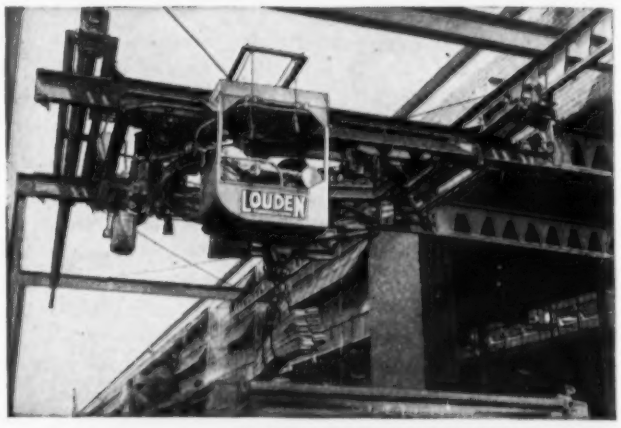
FLEXIBLE STEEL LACING COMPANY

4664 Lexington St., Chicago 44, Illinois

Also sole manufacturers of Alligator Steel Belt Lacing for flat conveyor and transmission belts and FLEXCO Belt Fasteners and Rip Plates for fastening and repairing conveyor belts.

For more details circle NED-2243 on enclosed inquiry slip

UNLOADING OR LOADING CARS WASTING YOUR MEN & MONEY?



Louden OVERHEAD HANDLING OFTEN PAYS FOR ITSELF IN A FEW MONTHS BY LETTING 2 OR 3 MEN DO WORK OF A SLOW AND COSTLY "BULL GANG"

Getting things in and out of your plant a problem? Labor hard to find and hard to keep? Handling too slow; machines down time and again waiting for raw stock or parts? Labor costs and demurrage charges driving you mad? **You** need a Louden Crane like the one shown here . . . hundreds of plants have found them the **perfect** answer to their railroad siding problem. And many use them to load and unload open body trucks as well as gondola and flat cars.

Loading docks can be eliminated entirely because materials received can be moved directly to warehouse or start of fabrication on the overhead tracks, to any location inside building. Conversely, such a system can deliver finished products into waiting cars or trucks without intermediate handling. Length of runway can cover entire siding or truck lane, if desired. Design can meet any need for weight or bulk. Ask a Louden engineer about **your** problem. Wire or write **now.**

FREE ILLUSTRATED BOOK

Case histories telling how Louden Handling Systems have saved time and money for widely different kinds of industries are described and pictured in a new 56-page book called, "Economical Material Handling". Write for it.

THE LOUDEN MACHINERY COMPANY

5124 S. Superior Ave., Fairfield, Iowa

Louden

OVERHEAD MATERIAL HANDLING

For more details circle NED-2244 on enclosed inquiry slip

BENDIX FRIEZ

Bendix-Friez THERMISTORS

(NEGATIVE TEMPERATURE CO-EFFICIENT CERAMIC RESISTORS)

• These temperature responsive resistors are useful as temperature measuring elements and as liquid level sensors; they are especially well suited to compensation where the circuit constants must be maintained irrespective of temperature changes. Since they are a fired ceramic, they are stable under practically all conditions and respond only to temperature changes.

Typical application in capsule form for temperature sensing of hydraulic oil.

Many other values can be obtained from standard diameter material. Because the thermistors are made in our own plant, under extremely careful control, special compositions, shapes, and resistance values, hermetically sealed or otherwise protected, can be made in any quantities to suit your individual requirements.

We invite your Inquiries Write Dept. I

BENDIX-FRIEZ STANDARD ROD TYPES

Size (inches)	@ +30°C.	@ 0°C.	@ −30°C.
.140 x ¾	45 ohms	88 ohms	193 ohms
.040 x 1.5	14,000 ohms	29,946 ohms	74,676 ohms
.018 x 1.5	40,000 ohms	94,040 ohms	262,400 ohms

FRIEZ INSTRUMENT DIVISION of Bendix Aviation Corporation
1324 Taylor Avenue • Baltimore 4, Maryland
Export Sales: Bendix International Division, 72 Fifth Ave., N.Y. 11, N.Y.

For more details circle NED-2245 on enclosed inquiry slip

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Integral Horsepower Electric Motors ¾-200 hp.

NOW AVAILABLE from STOCK in NEW YORK CHICAGO KANSAS CITY NEW ORLEANS DALLAS and LOS ANGELES Warehouses

Strictly conform to NEMA FRAMES AND SPECIFICATIONS. On hand now, 1-phase and 3-phase: Open Drip Proof Motors, Totally Enclosed Fan Cooled Motors, 4 types of Pump Motors, and Adjustable Speed Schrage Motors. All ACEC motors fully guaranteed. Service available from 232 distributors and service shops. Write, wire, or telephone your requirements.

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Sole Representatives of
ATELIERS de CONSTRUCTIONS ELECTRIQUES de CHARLEROI
Branches and Representatives in Principal Cities

For more details circle NED-2246 on enclosed inquiry slip

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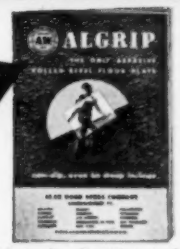


SLIPPING ACCIDENTS? Write for Booklet A-4

This Free 8-page Booklet Shows You How To End Them with A.W. ALGRIP

ABRASIVE ROLLED STEEL FLOOR PLATE

- A.W. ALGRIP is the world's *only* Abrasive Rolled Steel Floor Plate.
- Wet or dry, ALGRIP prevents slipping—even on steep inclines!
- Light, tough—thinner sections can be used.
- Easy to install—needs no maintenance.
- Over 1001 plant and product applications—wherever men walk or climb.

THERE'S NEVER A SLIP ON A.W. ALGRIP

A.W. ALGRIP

ABRASIVE ROLLED STEEL FLOOR PLATE

Product of ALAN WOOD STEEL COMPANY

Conshohocken, Pa.

Over 125 Years of Iron and Steel Making Experience

Other Products: PERMACLAD Stainless Clad Steel A W SUPER-DIAMOND Floor Plate · Plates Sheets · Strip · (Alloy and Special Grades)

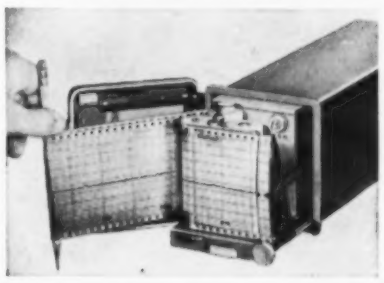
For more details circle NED-2247 on enclosed inquiry slip

CABLE & SLING LOCK holds long and irregular bundles

Use of Cam A Loc cable lock and sling in handling irregular shapes and lengths of heavy and rough material brings about savings in dead weight shipments, safety and speed in handling and elimination of maintenance. Device utilizes weight and expanding pressure of load itself to bind any bundle tightly and securely. Same force is used to lock the binding until it is released by slight pressure on hook of handle. Sling thus unlocked is recovered for further use. All units are forged from SAE 1045 steel and are heat treated to 302-321 Brinell hardness. Locks are made in four sizes for wire rope with breaking strengths of 13,100, 23,000, 35,900 and 51,200 lb. Slipping point of lock is one-half of break strength of wire rope. Made by **Cam A Loc Co.,** Dept. N, 1971 W. 111th St., Chicago 43, Ill.

For more details circle NED-2248 on enclosed inquiry slip

SMALL STRIP CHART RECORDER electronically actuated unit will record many process variables



Independently powered miniature strip chart recorder with electronically actuated pen is designed for use with Autronic control system for such variables as temperature, pressure, level and flow in chemical and food processing plants, refineries, power plants and industrial processes. This electronic servo-powered null-balance device creates accurate, instantaneous record of measured variable.

Rotary solenoid motor driven pen will traverse full 3-in. chart width in ½-second. Three-position response-speed adjustment provides for dampening of high frequency variables without affecting sensitivity or accuracy of recorder. Pen records over range of 0.0 to 0.5-v ac which is standard output transmission of all primary elements in control system.

Plug-in connections are used and entire mechanism can be removed from circuit. Recording mechanism can be pulled out approximately 3 in. from case for inking of pen and inspection of past record without interruption of the operation of the unit. Three hours of record are visible through glass-windowed door which is held closed with magnetic latch. Standard chart speed is 1 in. per hour, and a 30-day chart is supplied with graduations linear, square root or in terms of variable being measured and recorded. Made by **Swartwout Co.,** 18519 Euclid Ave., Cleveland 12, O.

For more details circle NED-2249 on enclosed inquiry slip

THOMAS

MAKES 1000 DIFFERENT KINDS OF CASTERS & WHEELS

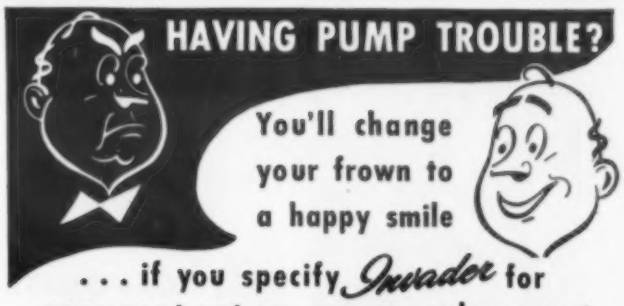
Write for complete catalog and price list

THOMAS TRUCK & CASTER CO.

247 MISSISSIPPI RIVER
KEOKUK, IOWA

For more details circle NED-2250 on enclosed inquiry slip

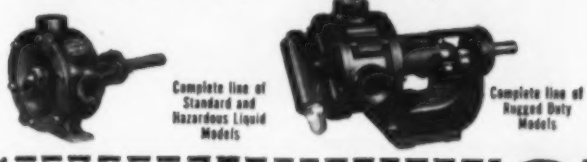
HAVING PUMP TROUBLE?



You'll change your frown to a happy smile

. . . if you specify *Invader* for your next rotary pump replacement

INVADER Pumps are engineered to perform better . . . longer. They "stand up" under rugged conditions. Will fit your equipment with no expensive changes in piping or mounting.



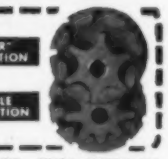
Complete line of Standard and Hazardous Liquid Models

Complete line of Rugged Duty Models

Rounded tooth design is one of the "inside" reasons why INVADER Pumps last longer . . . give better service. The positive seal and rolling contact represent a big improvement over the old-style construction of gear-within-a-gear rotary pumps.

"INVADER" CONSTRUCTION

OLD-STYLE CONSTRUCTION



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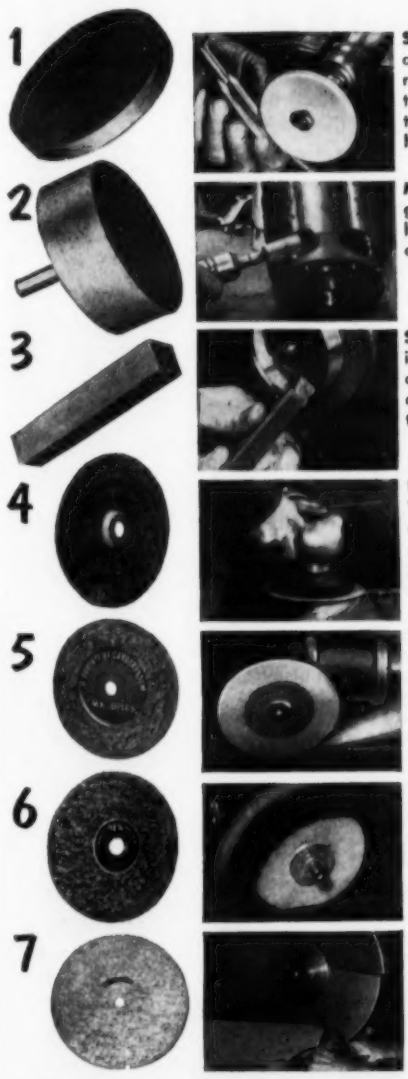
The SCHIRMER-DORNBIRER PUMP Co.
1719 EAST 39th STREET CLEVELAND 14, OHIO

For more details circle NED-2251 on enclosed inquiry slip

COMES IN 7 FORMS

...serves you in hundreds of ways



1 **STRAIGHT WHEELS** are favorites for deburring and polishing, yet their tough bonds make them rugged enough for heavy stock removal.

2 **MOUNTED WHEELS** grind and polish those hard-to-reach spots in one operation.

3 **STICKS** for hand-finishing, and for breaking down edges of parts spun on a lathe—far safer than scrapers or files.

4 **DEPRESSED CENTER WHEELS** are widely used on portable grinders and disc sanders for heavy stock removal, slotting and light cutting-off.

5 **DISCS** supported by sander pads assure weld grinding and stock removal with economy, since only periphery and one side are abrasive.

6 **GENERAL PURPOSE CUT-OFF WHEELS** are effective for slotting, beveling and tool sharpening, as well as cutting-off.

7 **PRODUCTION CUT-OFF WHEELS** are ideal for all types of non-ferrous cutting-off, with speed and safety.

MX the versatile, long life, self-cleaning, high strength, cushion-action abrasive

by CARBORUNDUM
TRADE MARK

offering ALL abrasive products ...to give you the proper ONE

"Carborundum" and "MX" are registered trademarks which indicate manufacture by The Carborundum Company, Niagara Falls, New York.

For more details circle NED-2252 on enclosed inquiry slip

ONE. Good Way TO SAVE PRODUCTION TIME

KESTER SOLDERFORMS

For Soldering with flame, carbon-resistance, oven, induction and conventional iron

DIMENSIONAL STABILITY Every single Kester Solderform is made exactly to specification. What's more . . . they are delivered that way to you, in perfect condition, because of Kester's scientific packaging.

Write for sample assortment or test samples for your specific job.

KESTER SOLDER COMPANY
4249 Wrightwood Ave., Chicago 39
Newark 5, New Jersey • Brantford, Canada

KESTER SOLDER

For more details circle NED-2253 on enclosed inquiry slip

where ELSE can you use PRINT-AD STRING

the "TIE that TALKS"?

Tie up your products with Print-Ad String, and wherever they go they tell people your name or slogan, they give directions, they measure footage, they provide grade markings—they tell whatever you want told . . and tell it in a novel, colorful way.

Here's a tremendously strong COTTON tie—in thicknesses down to .003, widths down to ⅛", in any color or combination of colors you want—a tie that won't mar or dent the edges of articles tied in it—won't slip in the knot—won't stretch—and adds a smart touch to your package.

Mighty useful for manufacturing short-cuts, too. Be informed! Mail coupon now for FREE booklet full of valuable ideas!

BETTER TYING

Holds parts firmly for assembly, cutting, drilling. Holds parts in finished assemblies . . Measures running footage . . Gives directions, grade marks, identifications.

BIG HELP IN THE PLANT

Good-looking all-cotton ties! . . Flat, won't mar or dent edges of boxes or merchandise . . Won't slip in the knot . . Non-stretch, great strength . . Also used as rip-cord opener, from candy bars to survival kits . . Ties anything!

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GENTLEMEN: Without cost or obligation send me your FREE Idea Book.

My Name _____
Title _____
Company _____
Address _____
City _____ State _____

For more details circle NED-2254 on enclosed inquiry slip

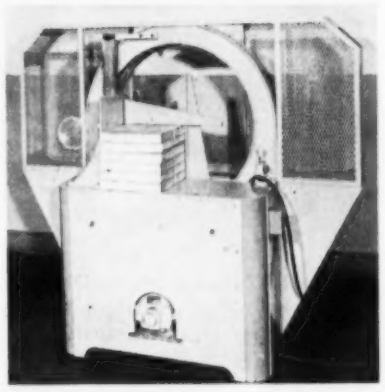
HIGH-INTENSITY ILLUMINATOR has 100,000 candlepower lamp for penetrating high film densities

Wide range of x-ray film densities from 0.5 to 4.5 can be studied with iris-diaphragmed, high intensity viewer or illuminator which incorporates special 100,000 candlepower lamp. Opening can be steplessly dilated or contracted from ¼-in. triangle to 5-in. diameter circle for concentrating light on area in question. Lamp has average life of 1000 hours and rated voltage of 115. Greater candlepower can be obtained by raising voltage to 135, although this overload shortens lamp life.

Controls are recessed behind surface of illuminator for moving radiographs without touching them. Cleaning lenses, the face of lamp or replacing lamp can be done without tools, and circuit is so wired that lamp cannot be energized unless blower system is on. Glass panel with filter protection remains cool, shielding films from lamp heat. Made by **General Electric Co.**, X-Ray Dept., Dept. DG, 4855 Electric Ave., Milwaukee 14, Wis.

For more details circle NED-2255 on enclosed inquiry slip

PACKAGING MACHINES for automatic volume bundling of packages and elongated items

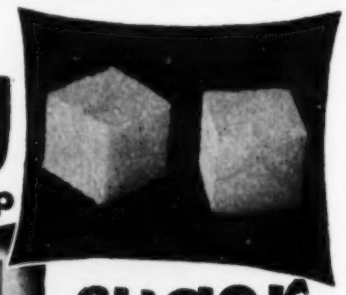


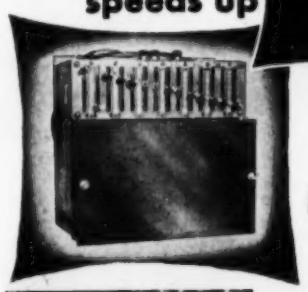
Custom-built and designed for use with large size rolls of pressure - sensitive filament tape, two packaging machines are designed for automatic volume bundling and reinforcing with tape. Model G. W. applies one or two complete wraps of tape around cartons, bundles of cartons and similar items at rate of five bundles or cartons per minute. It does job automatically, starting tape on carton, wrapping it as desired and cutting it at completion of wrap. Single operator controls the machine which can handle bundles within limits of 4 to 20 in. in both height and width and minimum length of 6 in.

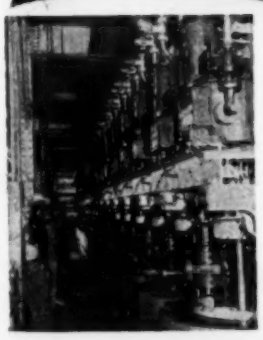
Model C. G. is mass production machine for automatically loading, applying tape and unloading a bundle as often as every 20 seconds. It is suited for bundling metal stock, pipe, conduit, tubing, lumber and other elongated materials. Also manned by single operator, it has center section which receives, nests and clamps items to be bundled, plus two adjustable tape-applying heads which wrap bundle. Use can be with wide conveyor tracks or inclined tables. Made by **Guide Co.**, Court & Broad Sts., Canfield, O.

For more details circle NED-2256 on enclosed inquiry slip

EAGLE timing speeds up sugar PRODUCTION







For faster, continued accurate production, Eagle Multiflex Timers precisely control the operation of 16 large centrifugals producing huge quantities of granulated sugar. Sixteen timers steadily repeat the operation of each centrifugal, without chance of error, all controlled from one panel with one operator. Eagle Signal builds a timer for your industrial process. Write for general bulletin 340.

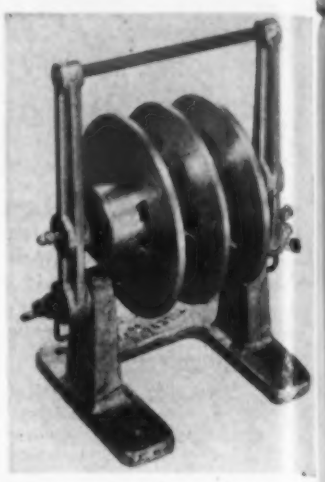
AN EAGLE TIMER FOR EVERY TIMING PROBLEM!

EAGLE SIGNAL Industrial Timers
EAGLE SIGNAL CORPORATION MOLINE, ILL.

Export Agent: 13 EAST 40th ST., NEW YORK 16, N. Y.

For more details circle NED-2257 on enclosed inquiry slip

VARIABLE SPEED CONTROL



Variable speed control of V-belt and equipment up to a maximum 3 to 1 ratio is provided by this single lever controlled unit. Mechanically simple in design and sturdily constructed to withstand hardest service, models 1A and 2A Toledo variable speed controls have numerous unique features including; plain, smooth pulley, eliminating noise and vibration; stepless speed variation up to full 3 to 1 ratio; minimum pulley diameters are increased to transmit greater H. P. over entire range; new pulley design providing cylindrical bottom for V-belts which fixes minimum pitch diameters, preventing damage to belts and giving increased torque; single arm support for easy belt application; large shaft, oilite bearings and lubricant reservoir; sector plate serving as dial indicator and additional locking medium; unusually attractive prices.

Wheel assemblies can also be purchased without mountings for application on machines providing built-in speed control.

If you have a variable speed control problem, either on plant equipment or on machinery you build for sale, investigate the Toledo variable speed control . . . you'll be interested in its efficiency and low price. Ratios as high as 10 to 1 are available. **The Toledo Timer Co.**, 2224 Albion St., Toledo, O. Advt.

For more details circle NED-2258 on enclosed inquiry slip

SHENANGO Centrifugal CASTINGS ... KEY TO SAVINGS

Teamed up for longer life under pressure

SHENANGO CENTRIFUGAL CASTINGS OF MEEHANITE METAL

These ram pistons, centrifugally cast of Meehanite Metal for 800-ton hydraulic press, must withstand 4,000 p.s.i. Completely machined and assembled by Shenango.

FIRST, Shenango's centrifugal process means a uniform, high-strength, pressure-dense casting, free from sand inclusions, blow holes and other defects. Next, in Meehanite Metal you have finer graphite flakes, always more evenly dispersed, thus avoiding stress concentrations and permitting a finer finish.

So here's a combination you just can't beat for wear-life . . . for resistance to abrasion, pressure or shock . . . for long-range *economy*!

If *your* plans call for essentially symmetrical parts, large or small, rough, semi- or finish-machined, check with Shenango. Get *all* the facts! Informative bulletins are yours for the asking.

SHENANGO-PENN MOLD COMPANY
Dover, Ohio
Executive Offices: Pittsburgh, Pa.

SHENANGO

ALL RED BRONZES • MANGANESE BRONZES • ALUMINUM BRONZES
MONEL METAL • NI-RESIST • MEEHANITE METAL

For more details circle NED-2259 on enclosed inquiry slip

Productimeters for every counting job can be built into your machines. This metered accuracy is desired and an added sales feature — so important to those who know that Productimeter control means increased profits.

DURANT MANUFACTURING CO.

Send for Catalog No. 101

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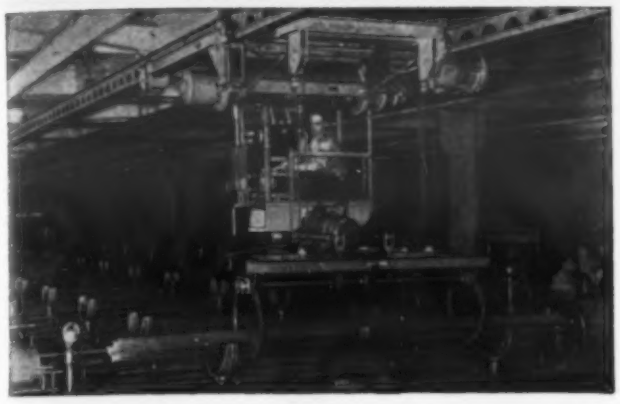
PRODUCTIMETERS
SINCE 1879 Count Everything

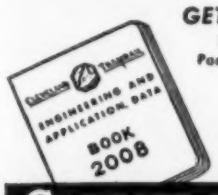
For more details circle NED-2260 on enclosed inquiry slip



PICK UP — TRANSPORT — DELIVER

ALL OPERATIONS BY CAB OPERATOR

Pipe, rod, bars, etc., are picked up, transported and delivered with this motor-driven carrier and grab. The operator controls all motions from the cab without need of floor assistants. The carrier travels on two overhead rails. Material delivery is speeded. Floor space saved. Handling costs cut.



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BOOK No. 2008
Packed with valuable information..

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6630 East 285th St., Wickliffe, Ohio

CLEVELAND TRAMRAIL

For more details circle **NED-2261** on enclosed inquiry slip

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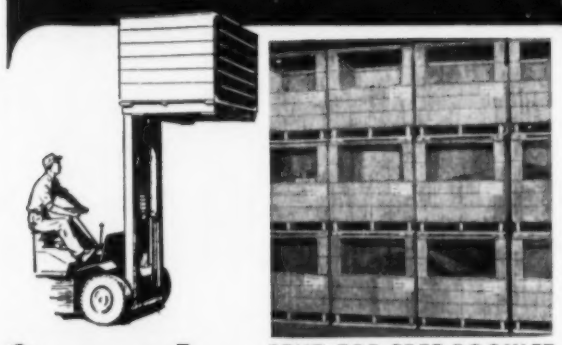
Generalift ★★★★★
PALLET BOXES

1. CUT MATERIALS HANDLING COSTS
2. REDUCE STORAGE COSTS



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General ★★★★★ BOX COMPANY
GENERAL OFFICES:
1859 MINER STREET, DES PLAINES, ILL.
DISTRICT OFFICES AND PLANTS: Cincinnati, Denville, N. J., Detroit, East St. Louis, Kansas City, Louisville, General Box Company of Mississippi, Meridian, Miss., Milwaukee, Sheboygan, Winchendon. Continental Box Company, Inc.: Houston, Dallas.

For more details circle **NED-2262** on enclosed inquiry slip

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It says "STOP" to Solids— "GO" to Fluids

Here is a BETTER Strainer to "police your pipelines"

- **FIRST**—*The Screen*, a high-grade, woven Monel wire basket that catches solids—lets condensate, oil or other fluids flow freely.
- **SECOND**—*Finish*. Cadmium plated for protection against corrosion and for better appearance.
- **THIRD**—*Easily Cleaned*. Blow-off bushing made for easy removal. Bushing and Screen come out together. Screen automatically aligns on reassembly.
- **THOUSANDS IN SERVICE**—Sold by over 150 Mill Supply Houses. 6 sizes from ½" to 2" for pressures up to 600 lb. Reasonably priced.

See your supply house or write for Bulletin S-201.

YARNALL-WARING COMPANY
131 Mermaid Ave., PHILADELPHIA 18, PA.

YARWAY STRAINERS

For more details circle **NED-2263** on enclosed inquiry slip

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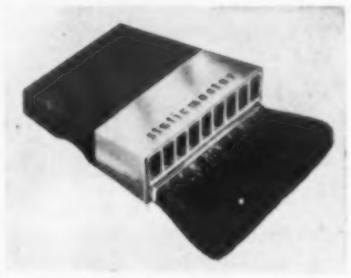
STATIC REMOVER
bristles remove dust and static



Made with housing of stainless steel, 3-in. Staticmaster static remover can be used for removal of static electricity from photographic equipment, negatives and color tranparencies. Other uses are in such industrial applications as lens and instrument manufacturing and physical and chemical laboratories. Device is brushed over surface to be neutralized, with Polonium strip in housing facing down toward surface. Bristles remove dust and lint while surface is being made free of static electricity. Once free of static, surface will not attract dust or lint until recharged. Made by **Nuclear Products Co.**, 2152½ Newport Blvd., Costa Mesa, Calif.

For more details circle **NED-2264** on enclosed inquiry slip

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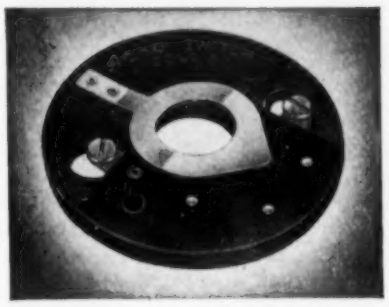
STARTING SWITCH
for fractional horsepower motors



Snap action mechanism of this totally enclosed starting winding switch for fractional horsepower motors has reduced likelihood of failure as dirt is sealed out. Switch assures positive operation and improved control at changeover point of motor. Switch illustrated is 2.80 in. diameter and 0.05-in. thick. It is designed for mounting around motor shaft and is directly operated by centrifugal unit. Housing is black thermosetting plastic. Configuration can be to suit installation requirements. Made by **Acro Mfg. Co.**, 2040 E. Main St., Columbus 16, O.

For more details circle **NED-2265** on enclosed inquiry slip

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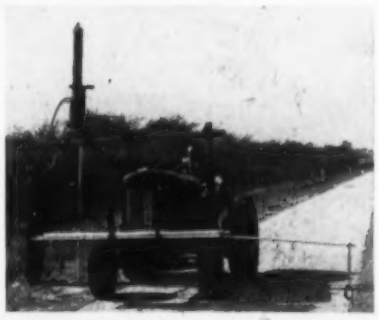
PNEUMATIC STAKE DRIVER
is 7-ft air feed with paving breaker



Any stake that requires being driven such as vineyard, snow fence or highway marker stakes can be driven with this Pneumadriver in a fraction of the time necessary if done by hand. Driver is 7-ft feed type with a paving breaker, for mounting on a Schramm Pneumatractor. Paving breaker is fitted with steel tip shaped to fit stakes being driven. Photo shows one unit operating on New Jersey Turnpike where 350 U and T stakes per day were driven by a two-man crew. Made by **Schramm Inc.**, Dept. NED, West Chester, Pa.

For more details circle **NED-2266** on enclosed inquiry slip

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Another Denison FIRST

NEW 2000 PSI SINGLE-STAGE DUAL-PURPOSE VANE-TYPE OIL-HYDRAULIC PUMP

Denison is first again in hydraulic equipment with this all-new, radially balanced constant displacement pump/motor built for continuous duty at 2000 psi. It's ready for use as either pump or motor *without alterations of any kind*. Added features include clockwise or counter-clockwise operation as either pump or motor . . . up to 60 gpm pumping capacities . . . Torque ratings up to 4600 inch-pounds as a motor . . . Hydraulically balanced vane action . . . 3 sizes and 8 models — each offering a variety of porting combinations as either pump or motor . . . Face, flange and foot mountings.

"The Finest Money Can Buy!"

Write for Bulletin P-5 TODAY

The DENISON Engineering Co.
1151 Dublin Road, Columbus 16, Ohio

DENISON HydrOILics

For more details circle **NED-2267** on enclosed inquiry slip

---

the double-duty micrometer!

You're in for a real surprise the first time you use a Federal MIKEMASTER . . . either as an *indicating micrometer* or as an *indicating snap gage* for measuring duplicate parts. Here are Mikemaster's big features that make it superior to regular "mikes":

- BUILT-IN DIAL INDICATOR with clear graduations for quick size checking down to a .0001".
- CONSTANT ANVIL PRESSURE eliminates errors of "feel" . . . same high accuracy no matter who uses Mikemaster.
- RETRACTABLE LOWER ANVIL for easy (non-scratching) insertion of workpieces.

Try the Mikemaster yourself. Write for a free demonstration. FEDERAL PRODUCTS CORPORATION, 1173 Eddy Street, Providence 1, Rhode Island.

FEDERAL
Largest manufacturer of indicating type gages . . . exclusively.

For more details circle **NED-2268** on enclosed inquiry slip

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Now! The OZAMATIC... Desk-Top Machine

MAKES DIRECT COPIES AT NEW LOW COST!

Makes a single copy in seconds . . . up to 1000 copies an hour

Ozalid's new Ozamatic produces clear, exact copies of anything drawn, typed, printed or written . . . any width up to 16", any length . . . on a variety of papers, cloths or foils.

It copies by light transmission at high speed—direct from any translucent original . . . at about 1½¢ per letter-size copy.

Ozamatic Saves Money . . . Eliminates double its cost, in waste time alone, in a single year. No retyping, no stencils, no negatives, no make-ready, no proofreading, because Ozamatic copies direct.

Large Volume From a Small Machine. Fits on a small desk, as shown above. Anyone can learn to operate the Ozamatic in five minutes. For opaque originals, all that is required is an inexpensive, fast, intermediary process.

WRITE FOR FREE Illustrated Literature. Tells you in full detail how Ozamatic can help boost your production . . . cut paperwork costs. Learn how easily Ozalid fits into your accounting, purchasing, shipping, order handling and receiving systems. In any business, any department!

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"From Research to Reality"
Ozalid in Canada—Hughes Owens Co. Ltd., Montreal

For more details circle **NED-2269** on enclosed inquiry slip

Check Temperatures Instantly... Accurately with Alnor TYPE 1500 PORTABLE PYROMETER

Wherever temperature readings are required—on the production line, in the laboratory or in the field—this sturdy precision instrument can bring you instant, accurate results.

Here's Why

It's Fast . . . in operation and quickly read. Precision movement designed to laboratory standards. Direct reading scale face is easily understood—no slide wires or conversion tables necessary.

It's Accurate . . . consistently to within ¾ of one percent under almost all variable conditions. Sturdy, protective case assures continued accuracy in toughest portable service. Ten scale ranges available, from 0-400° to 0-3000°F. Equivalent Centigrade scales available at no extra cost.

It's Portable . . . compact size, 6½"x6"x3", and light weight make this pyrometer highly portable and easy to use anywhere. Write today for complete details and prices. Illinois Testing Laboratories, Inc., Room 529, 420 N. La Salle Street, Chicago 10, Illinois.

Send for Bulletin on 1500 Pyrometer.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

▲ For more details circle NED-2270 on enclosed inquiry slip ▲

Get these Better Water Resistant Glues that Meet Government Specifications

Paisley SCIENTIFIC ADHESIVE SERVICE

FREE, up-to-the-minute Paisley Laboratory Reports on highly efficient water resistant Adhesives that meet government requirements are *ready for you now!* Get the newest scientific data and complete information about the Glues you'll need for defense work. Paisley Laboratories have developed and perfected a series of modern Adhesive formulae which comply with the requirements of such specifications, as, JAN-P-101, JAN-P-120, JAN-P-133, JAN-P-140, and UU-T-81c. As new government Adhesive specifications are completed, definite recommendations will be offered by our skillful laboratory staff.

Leading users of Adhesives from coast-to-coast depend upon PAISLEY Scientific Service for *all* their civilian and defense needs. They *know* that regardless of serious material shortages, they'll *always* get quick shipment of an Adhesive that will prove satisfactory in every way! Tell us about YOUR needs. Use the convenient coupon below.

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☐ #3850—complies with UU-T-81c
☐ #3354—complies with JAN-P-133
☐ ..... indicate Gov't. Spec. if not shown above.
☐ ADHESIVE OPERATION DATA SHEET (You fill in and return for laboratory recommendation.)

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ADDRESS _____
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Manufacturers of Glues, Pastes, Resin Adhesives, Cements and Related Chemical Products
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630 W. 51st STREET, NEW YORK 19, N. Y. • PHONE COLUMBUS 5-2860

▲ For more details circle NED-2271 on enclosed inquiry slip ▲

WIRE CUTTER-STRIPPER simplifies electrical wiring jobs

This Jim-Handy wire cutter snips up to 18-gage copper wire when trigger is pressed. Wire stripper, which slides into handle of tool, is out-of-the-way when it is not required. It can also be used for holding wires and strands during soldering operations. Distributed by **C & G Mfg. & Sales Co.,** Dept. N, P. O. Box 1525, Columbus, O.

▲ For more details circle NED-2272 on enclosed inquiry slip ▲

HEAVY-DUTY ELECTRIC TRACTOR has 800 to 5500 lb drawbar pull

Powered by two high-capacity series-wound enclosed motors capable of delivering 800 lb normal and 5500 lb maximum drawbar pull, model A-800-4 heavy-duty electric tractor is designed for use in automotive, aviation, railroad, metalworking, food, textile and other industries. Unit has four-wheel drive, four-wheel steering controlled by automotive wheel-type steering assembly and foot-pedal accelerator. It has four travel speeds in either direction. Directional control is conveniently mounted on steering column. Drive axle assemblies consist of double-reduction, spiral bevel and spur gear units with standard four-pinion differential. Drive shafts are full floating and wheels are Timken-bearing mounted. Made by **Mercury Mfg. Co.,** 4038 S. Halsted St., Chicago 9, Ill.

▲ For more details circle NED-2273 on enclosed inquiry slip ▲

ELECTRIC PIERCING PRESS mounted on casters for mobility

Quantity piercing of up to ½-in. diameter holes in materials up to 3/16 in. thick can be performed by this automatic electric piercing press. Feature of machine is that it does not require any hand or foot levers for operation. Press is tripped through two contacts on magnetic stripper plate. Ram of press is in bed of machine, allowing punches to be mounted for easy location of pierced holes. It will receive standard Allied punch and die and is provided with nonrepeat mechanism. Machine is mounted on casters. Made by **Dayton Rogers Mfg. Co.,** 2822 Thirteenth Ave. S., Minneapolis 7, Minn.

▲ For more details circle NED-2274 on enclosed inquiry slip ▲

HERE'S THE FULL STORY

of LOW COST HIGH EFFICIENCY filtration with Titeflex

Regardless of what you filter you'll find this booklet of interest. It contains full details of how Titeflex filters can reduce your filtering costs by (1) saving time and (2) saving materials. Shows entire cycle of operation graphically and lists sizes and capacities of various models. If you filter *anything* it will pay you to get this information.

SEND FOR YOUR *FREE* COPY TODAY

TITEFLEX, INC.
507 Frelinghuysen Avenue, Newark 5, N. J.

▲ For more details circle NED-2275 on enclosed inquiry slip ▲

RE-NU TOP STEEL-BOUND SKID PLATFORMS

BUILT TO LAST A LIFETIME

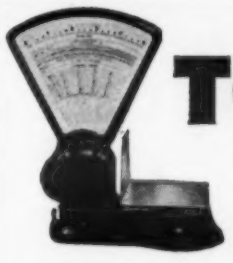
500 LB. LOAD UP TO 10 TONS

Designed to fit your loads and equipment. Plain bolted construction for use with hand lift trucks or bolted and welded under frame with armored ends for rough handling by powered trucks. Special purpose skids can be equipped with end racks, shelves, stake pockets, crane hooks, rounded corners and other special features.

SECTIONAL BINS ROLLAWAY SKIDS SKID-BOXES

THE LANHAM COMPANY
Magnolia & 12th Sts., Louisville, Ky.

▲ For more details circle NED-2276 on enclosed inquiry slip ▲

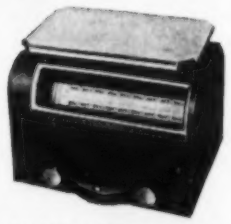


TOLEDO Mailing and PARCEL POST SCALES

Model 419—5 lb. capacity. Air mail, first class, parcel post, etc.

Control Postage Costs!

Save time . . . stop excess postage costs . . . avoid ill-will of "postage due" . . . with the speed and dependable accuracy of Toledo Scales! Choice of 11 models for mailing and parcel post . . . each with automatic Toledo indication of correct postage. Write for bulletin 3047-B. Toledo Scale Company, Toledo 1, Ohio.



Model 3659—Full capacity parcel post and express scale. Computes for all zones.

TOLEDO HEADQUARTERS FOR SCALES

▲ For more details circle NED-2277 on enclosed inquiry slip ▲

PLATECOIL (REPLACE PIPE COILS) cost less than fabricating pipe coils in your own plant

You can buy Platecoils for less money than it costs to fabricate pipe coils in your own plant. You also save critical steel because Platecoils require less than ½ the steel used in pipe coils of the same surface area. Installation takes far less time as Platecoils are mounted on simple hangers instead of the complicated racks needed for pipe coils. They take 50% less space.

Send for complete technical manual and descriptive Bulletin No. P57.

PLATECOIL DIVISION KOLD-HOLD MFG. CO. LANSING 4, MICHIGAN

▲ For more details circle NED-2278 on enclosed inquiry slip ▲

▲ For more details circle **NED-2279** on enclosed inquiry slip ▲

THIS TORIT

DUST SEPARATOR

Here is an installation involving a heavy volume of dust and lint, some of it of a particularly adhesive character. It was solved to the complete satisfaction of the user and the Wisconsin Industrial Commission, with the Torit 19-FM Dust Separator illustrated.

Torit dust collecting equipment connected to individual or small groups of machines possesses many advantages. There is little or no idle running time. No maze of piping obscures lighting arrangements, and pipe line friction is practically eliminated. Neither is there any interference with production set ups.

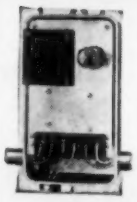
Whether your dust problems are large or small it will pay you to take those problems to:

TORIT MANUFACTURING CO.
298 WALNUT ST. ST. PAUL 2, MINN.
P. S. Also ask for the New Torit Catalog.

TORIT DOOR FASTENER
The sturdy and efficient door fastener used on Torit cabinets is available for use on your own products. Strike plate either flat or angular. Write for quantity prices.

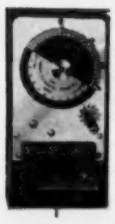
▲ For more details circle **NED-2280** on enclosed inquiry slip ▲

Lumenite OFFERS DEPENDABLE AUTOMATIC CONTROLS



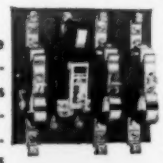
LUMENITE LIQUID LEVEL CONTROLS
Electronic action maintains and/or signals exact levels to 1/100 in. Floatless—no moving parts—sanitary—trouble free—no upkeep. For any liquid in any container—hot or cold—pressure or open. Easy installation. Write for detailed bulletin L-143.

LUMENITE TIMING CONTROLS



Complete line of industrial operation timers—manual or automatic reset. Time switches and timers. Improved and simplified construction. Write for bulletin T-143

LUMENITE MAGNETIC CONTACTORS



Electrically operated and held switches for heavy loads. Work with Electronic Level or Time Controls.

Reversing switches—transfer switches. New noiseless operation. Write for bulletin C-143

Lumenite Electronic Co.
407 S. Dearborn St., Chicago 5, Ill.

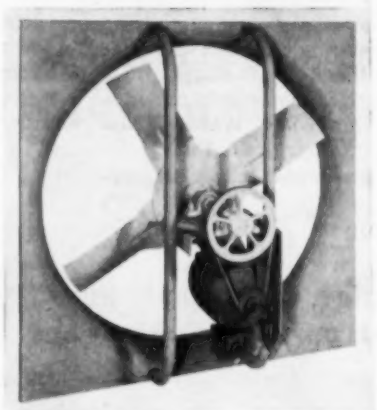
▲ For more details circle **NED-2281** on enclosed inquiry slip ▲

BORING TOOL HOLDER facilitates turret lathe setup

Adaptable to various size turret lathes, EveredE turret lathe tool holder employs bushings to accommodate various sizes of boring bars. Eccentric barrel can be clamped quickly into desired position and holds boring bar rigidly. Setup time is held to minimum. Made by **Everede Tool Co.,** 2002 N. Parkside Ave., Chicago 30, Ill.

▲ For more details circle **NED-2282** on enclosed inquiry slip ▲

PANEL VENT FAN for low static pressure use

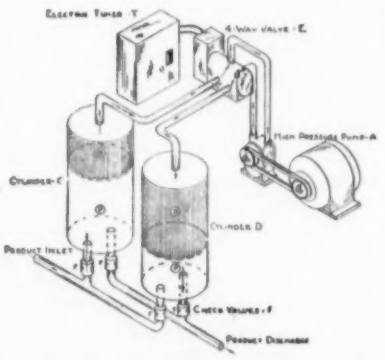


Available with 24, 30 and 36-in. diameter fan wheels, panel vent fan sets are for use at free delivery or relatively low static pressure. Air moving capacities are up to 13,190 cfm. All sets have totally enclosed ball bearing motors wound for dual voltage. Shutters and safety screen guards are available for sets supplied as shown in photograph. Fans have slow speed V-belt drive for quiet operation. Made by **American Machine & Metals, Inc.,** DeBothezat Fans Div., 99 DeBothezat St., East Moline, Ill.

▲ For more details circle **NED-2283** on enclosed inquiry slip ▲

HYDRAULIC PUMP handles difficult-to-pump materials

Slurries, very viscous pastes, abrasive or corrosive fluids and suspended solids are handled readily with this Hydrex Pump. Pumping action is positive, but so gentle that delicate food products such as whole strawberries or cherries are moved without crushing or injury. High pressure pump (A) pumps hydraulic fluid (B) alternately to and from cylinders (C) and (D). Four-way hydraulic valve (E) actuated by solenoid (T), controls fluid direction. Cylinders are stainless steel or other materials where required. Where contact between pumping medium and product pumped must be avoided, a suitable membrane is provided. Made by **Manton-Gaulin Mfg. Co.,** 67 Garden St., Everett 49, Mass.



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NEW LOCKER CATALOG

ANSWERS ALL YOUR CLOTHING STORAGE NEEDS!

penco *Perma Built* **STEEL LOCKERS**
SHELVING • CABINETS
Pioneer in Sheet Metal Products Since 1869

- Presents a Complete Range of Locker Types and Sizes.
- Tells How to Provide More Storage in Less Floor Space.
- Gives Newest Ideas on Locker Room Layout, Ventilation, etc.
- Shows How to Make "Custom-Type" Installations with Economical Standard Lockers.
- Lists Ways to Save Time and Money when Ordering.

Send for Your Free Copy Today!

PENN METAL Corporation of Penna.
82 OREGON AVE., PHILA. 48, PA.

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with "FLOATING-HUB" Casters!

Damaging shocks can't reach any load carried on Bassick "Floating-Hub" Casters.

Their built-in shock absorbers smooth out rough, bumpy floors . . . cut wear and tear on loads, trucks, and the casters themselves. Wide range of sizes for wide range of materials-handling equipment. Write for literature. THE BASSICK COMPANY, Bridgeport 2, Conn. Division of Stewart-Warner Corp. *In Canada:* Bassick Division, Stewart-Warner-Alemite Corp., Ltd., Belleville, Ont.

Bassick MAKING MORE KINDS OF CASTERS . . . MAKING CASTERS DO MORE

▲ For more details circle **NED-2286** on enclosed inquiry slip ▲

After years of wear and tear

Drawings are reclaimed without costly retracing

A case history based on the experiences of the Buflovak Equipment Div., Blaw-Knox Corp., Buffalo, N. Y.

When any one of the 80,000 odd drawings in the Buflovak files is incapable of producing the sharp, clean blueprints needed for the shop—there's no redrafting problem.

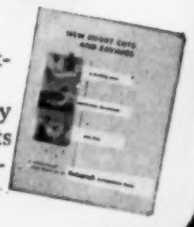
"New drawings" are made from old ones—quickly, inexpensively with Kodagraph Autopositive Paper.

This revolutionary photographic intermediate material intensifies weak line detail, drops out stains, creases . . . produces fast-printing duplicate originals with dense photographic black lines on a durable, evenly translucent white paper base.

And the job's done at low cost because "Autopositive" is unique—a photographic paper that can be handled in ordinary room light . . . that produces positive copies directly—without a negative step. Also, it can be exposed in standard print-making equipment . . . processed in standard photographic solutions. *Convenience, economy*—from start to finish. And it's the same story in subsequent print production: Autopositive intermediates print back at practical, uniform speeds . . . and produce sparkling prints even after hundreds of "run-throughs."

Kodagraph Autopositive Paper
"THE BIG NEW PLUS"
in engineering drawing reproduction

Write today for a free copy of "New Short Cuts and Savings." This interesting, well-illustrated booklet gives complete information on revolutionary Kodagraph Autopositive Paper . . . lists a selection of case histories which illustrates the many ways it is cutting costs in thousands of drafting rooms today.



EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak

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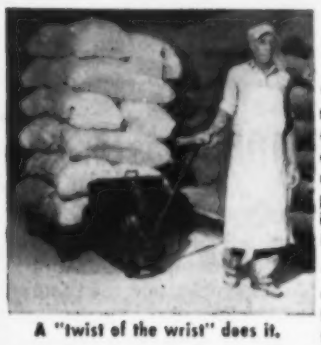
MOTO-TRUCS
GIVE
Greater Service
WITH
Longer Life...



A "twist of the wrist" does it.

Still in active service after 15 years. The First Moto-Truc Walkie (1936).

• The matchless performance of this original experimental model of the first "Walkie" is unequaled in the history of materials handling. It has long since paid for itself in many ways. It is SYMBOLIC of Moto-Truc's RUGGED stability.

• Thousands of Moto-Truc Walkies are in daily use all over the country. They operate on rigid, daily schedules with no loss of their original efficiency.

SEND FOR Bul. No. 51

DON'T BE SATISFIED WITH LESS THAN THE BEST

THE MOTO-TRUC CO.
1953 E. 59th ST., CLEVELAND 3, OHIO
PALLET, PLATFORM AND HI-LIFT TRUCKS

For more details circle NED-2288 on enclosed inquiry slip

"... LUG-ALL IS THE BEST HOIST I EVER USED IN 30 YEARS..."

INDIANA SUPERINTENDENT* SAYS MEN PREFER LUG-ALL LIGHTWEIGHT

Mr. R. E. P., like so many maintenance superintendents, finds Lug-All versatility combined with extreme light weight (under 10 lbs.) to be definitely a cost saving maintenance tool in daily work.

Yet it actually lifts 1½ tons 5 ft., or ¾ ton for 10 ft. and you'll find 3 swivel hooks plus a built-in pulley block, always ready for odd assignments. The handle is reversible, can be removed to prevent tampering. Hoist can be reversed, has free-wheeling under no-load condition, and double interlocking pawls for positive locking,—automatically, always, under load, yet it costs

ONLY $35.25 (FOB Factory)

Order your first LUG-ALL today or write for Bulletin #107 giving the full facts on this money saving tool. Find how a LUG-ALL can help you TODAY.

* Name on Request

LUG-ALL FEATURES

The Lug-All Winch Hoist has a "Safety Handle" to prevent accidental overload, stainless steel springs, oiled for life bearings, 133 strand aircraft cable and many more quality features.

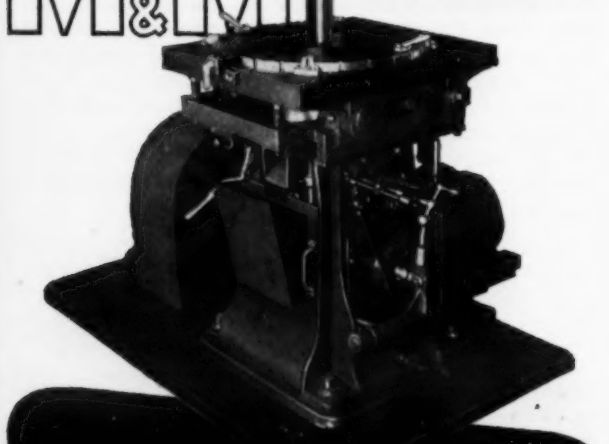
1 YEAR GUARANTEE

The Lug-All Company guarantees to replace, within one year of purchase, any parts because of defective workmanship or materials.

THE LUG-ALL COMPANY ®
WYNNEWOOD 6, PA.

For more details circle NED-2289 on enclosed inquiry slip

M&M giant keyseaters

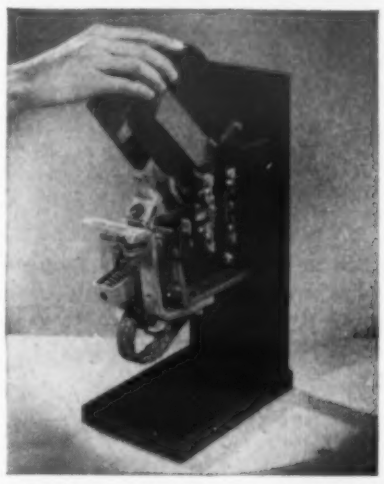


M & M Giant Keyseaters, built in a range of sizes, speedily and accurately cut internal keyways or splines in the bores of pulleys, gears, fly wheels or any other machine part. Special fixtures and cutters are available for unusual shaped keyways and taper work. Send us your problems.

mitts & merrill
1000 South Water • SAGINAW, MICHIGAN

For more details circle NED-2290 on enclosed inquiry slip

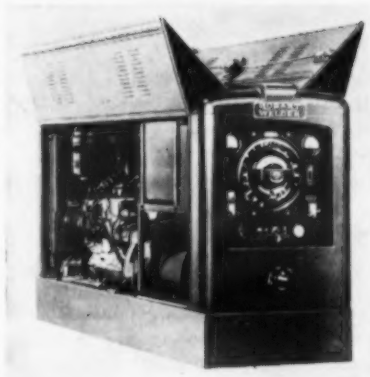
HEAVY DUTY CONTACTORS for direct current applications



Suitable for steel mill and other heavy duty applications, type M direct current contactors are available in all NEMA ratings from 25 to 2500 amperes. They are accessible from front, and only three mounting holes are required. Contacts and shunts can be replaced without removal of other parts. Operating coils are removed by taking out three bolts. Other features are self-cleaning knife-edge bearings, arc box designed for fast interruption and maintenance of alignment with moving armature, and electrical interlocks mounted directly on contactor frame. Made by **Westinghouse Electric Corp.**, P. O. Box 2099, Pittsburgh 30, Pa.

For more details circle NED-2291 on enclosed inquiry slip

ARC WELDER gasoline engine driven unit has 1000 current output combinations



By mounting all controls on panel at end of this gasoline engine driven arc welder, they are centrally located for easy adjustment of welding heat. Located on generator end, panel has generator controls, meters, welding and ground cable terminals, polarity switch, ignition switch, starter button, oil pressure gage, battery ammeter, and receptacle for 1 kw auxiliary power. Generator is of symmetrical four-pole multirange design. Large wheel with volt-amp adjuster within it controls 1000 combinations of welding current and open circuit voltage. Ten main steps or ranges are selected by heavy copper switch operated by large hand wheel. Adjuster provides 100 steps of fine adjustment in each range.

Oversize four-pole exciter quickly builds up voltage and offers freedom from accidental polarity reversal. Generator is powered by Chrysler industrial engine which includes standard battery type ignition, charger and starting motor. Engine speed is controlled by governor. Idling device slows engine when arc is broken. Time delay allows time to change electrodes without slowing down engine. Entire unit is enclosed in weatherproof steel canopy and is offered for stationary mounting or on pneumatic-tired four-wheel trailer. Made by **Hobart Brothers Co.**, P. O. Box 13, Hobart Sq., Troy 1, O.

For more details circle NED-2292 on enclosed inquiry slip

POSITIVE GRIPS
THE "HAMMER-LOCK" and Electroline FITTINGS

The "Hammer-Lock" has long been a favorite grip of wrestlers. But just as popular, in Industry, is the Electroline Fitting . . . these safe, economical, permanent wire-rope connectors may be installed by unskilled labor in a matter of minutes with ordinary mechanic's tools.

Electroline Fittings slash re-roping costs—and prolong wire-rope life by damping vibration stresses and overcoming rope fatigue at entrance to the fitting. Send for catalog describing "positive-grip" Electroline Fittings!

Electroline Company
4121 SOUTH LA SALLE STREET
CHICAGO 9, ILLINOIS
IN CANADA: POWERLITE DEVICES, LTD., TORONTO

For more details circle NED-2293 on enclosed inquiry slip

New! Low-Cost! Wide-Range!
VARIABLE Speed Sheaves
Easily Attached to Any Machine

1/15 TO 15 HP.
RATIOS UP TO 8:1

● Simple, sturdy Speed Selector Sheaves are applied to any machine in only a few minutes... giving you wide-range speed control at extremely low cost. You get wide speed variations with standard V-belts, since two variable pitch sheaves are used. Eliminates bulky sliding motor bases, movable jackshafts and wide, high-cost special V-belts.

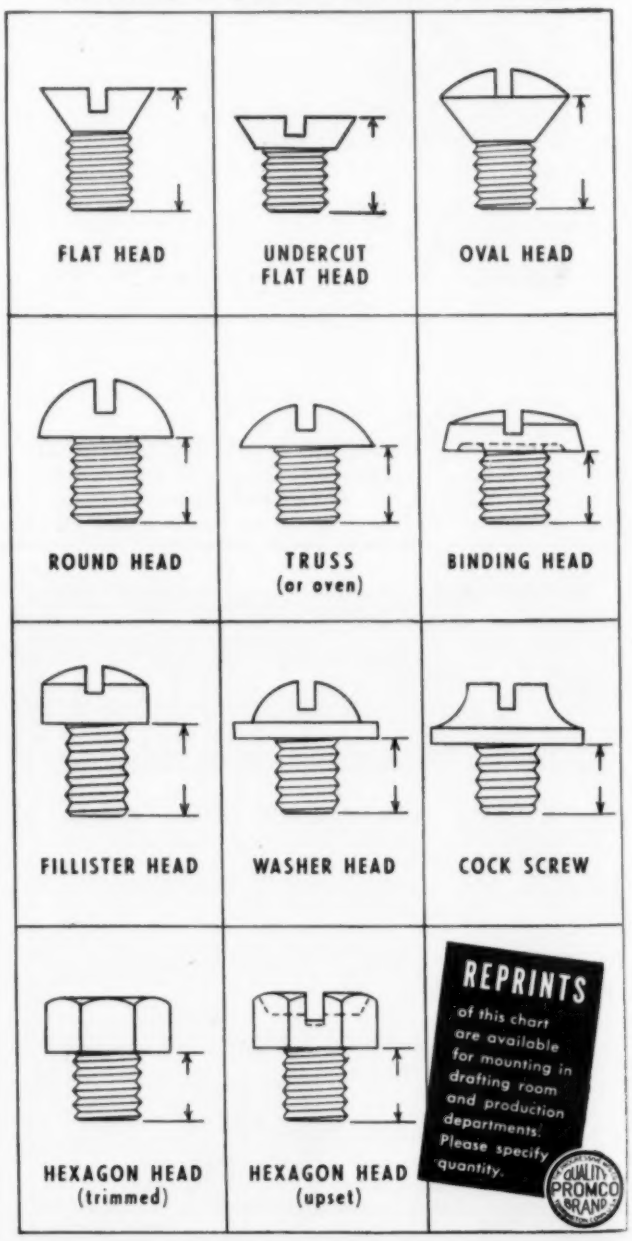
• Standard V-belts • Automatic belt alignment
• Fixed shaft centers • LOW COST

Write FOR FREE BULLETIN
SPEED SELECTOR INC.
118-N NOBLE COURT • CLEVELAND 13, OHIO

For more details circle NED-2294 on enclosed inquiry slip

SAVE DRAFTING TIME
Right Way to MEASURE MACHINE SCREWS

By dimensioning and naming machine screws as indicated, you avoid misunderstanding, cut down on drawing changes and save time in purchasing.



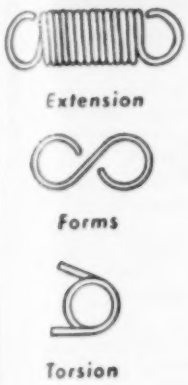
MACHINE SCREWS AND SPECIAL FASTENERS ARE OUR BUSINESS

WRITE FOR OUR CATALOG

THE PROGRESSIVE MANUFACTURING COMPANY
46 NORWOOD ST., TORRINGTON, CONN.

For more details circle NED-2295 on enclosed inquiry slip

Springs FOR YOUR ORDNANCE CONTRACTS

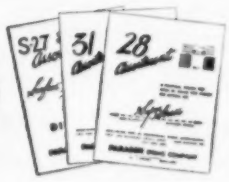


- Paragon has complete files on Government specifications.
- Experience in the manufacture of close tolerance, high quality springs.
- Complete heat treating and testing facilities.

Your ordnance springs come to you ready for assembly . . . inspected with test affidavits included with each shipment.

SEND SPECS. FOR QUOTATION

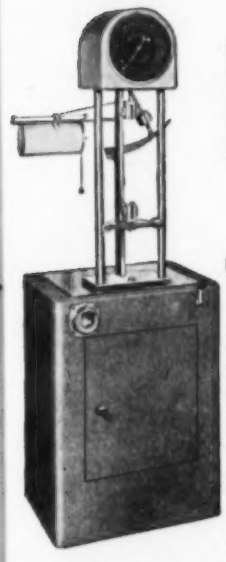
Write for STOCK SPRING DATA SHEETS giving complete specs, loading and design information.



PARAGON SPRING COMPANY
4619 West Fulton St., Chicago 44, Ill.
For more details circle NED-2296 on enclosed inquiry slip

small COMPACT TESTER

large ACCURATE RANGE



DILLON
multi-low-range universal
TESTER

A portable laboratory instrument that is accurate to ½ of 1%. Tests paper, thread, fabrics, plastics, springs, film, cord, wire, leather, resins, adhesives, glass, wood, ceramics, felt, cardboard, bakelite, insulation and any other materials which fall within its range. Has 5 scales: 0-10, 0-25, 0-50, 0-100 or 0-300 lbs.

Stress-strain curve automatically recorded on graph sheets. Limit switch prevents overrun. Indicates load as it is applied. Accessories permit transverse, tensile, compression and shear testing easily and economically. Speeds from 0" to 20" per minute. The ultimate in fine testing equipment yet *low* in cost.

Write or wire for illustrated bulletin —Today

W. C. DILLON & CO., INC.
1421-NE South Circle Ave. Forest Park, Ill.
For more details circle NED-2297 on enclosed inquiry slip

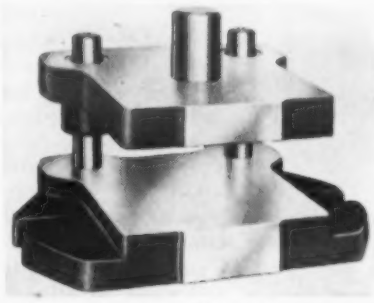
PIC of the Pack!
New Equipment Favorites — 100% Zinc Plated
PIC STEEL UNIONS*

Just the union for makers of original equipment, Pics are bright, good looking . . . and speed assembly and installation of your machines. Open end wrenches can be used because ends are uniformly flat-sided, uniformly parallel. Ends are strong, too — of heavy steel pipe coupling stock. Special wedge type bronze seat assures tightness. Zinc plating (even on threads) for maximum rust protection. And the best news is Pics cost *less* than a galvanized, *no more* than a black malleable union!

*For 150# Service...
Write for FREE SAMPLES

DART UNION COMPANY
132 THURBERS AVENUE, PROVIDENCE 5, R. I.
For more details circle NED-2298 on enclosed inquiry slip

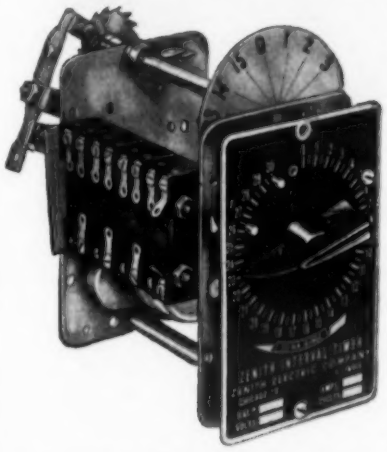
DIE SETS
design increases layout area



Straight rear pad incorporated in New Design die sets provides more layout and mounting area on punch holder, as well as on smaller die holders. Design gives sets maximum strength and minimizes weight. One long machined rear pad on punch and die holder assures uniformly accurate location of pin and bushing holes. Semisteel die sets have uniform grain structure and high tensile strength. Made by **Producto Machine Co.**, 965 Housatonic Ave., Bridgeport 1, Conn.

For more details circle NED-2299 on enclosed inquiry slip

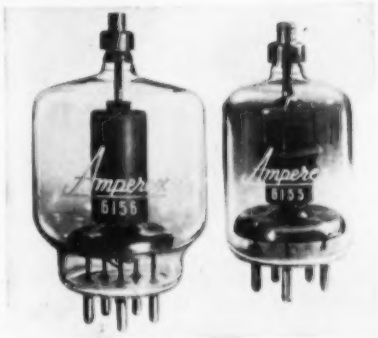
INDEXING INTERVAL TIMER
stops, starts, records process steps



Capable of timing and tabulating individual steps in an overall operation, this indexing interval timer is equipped with an automatic counting device. Applications include starting and stopping operations, as well as recording their progress so that operator can tell which ones have been completed at any given time. Up to 15 separate steps are automatically registered on counter dial each time timer is set for next part of cycle. Counter is reset at any time by button. Made by **Zenith Electric Co.**, 149 W. Walton St., Chicago 10, Ill.

For more details circle NED-2300 on enclosed inquiry slip

ELECTRONIC TUBES
have open-base for air circulation



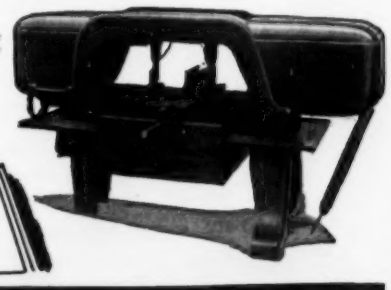
Improved versions of types 4D21 and 5D22 respectively, type 6155 and 6156 electronic tubes are of compact size. Skirt and metal base have been eliminated and pin connections pass directly through the powdered glass seal base. Free circulation of air around base pins is possible. Smaller size afford economical space arrangement in circuit construction. Made by **Amperex Electronic Corp.**, 25a Washington St., Brooklyn 1, N. Y.

For more details circle NED-2301 on enclosed inquiry slip

As an added safety feature, all Model "J"
JOHNSON METAL CUT-OFF BAND SAWS

come equipped with a BLADE GUARD. This guard is located between the Left Frame and Guides. It covers the exposed cutting portion of the blade as a means of protection. The Guard can be readily removed to change blade. Model J (illustrated), heavy, sturdy, cuts 10" rounds, 18" flats.

Also Model B, lighter, portable, rigid. Cuts 5" rounds, 10" flats.



Write for CATALOG!

JOHNSON MANUFACTURING CORP.
ALBION, MICHIGAN
For more details circle NED-2302 on enclosed inquiry slip

one good crane led to another

...at Kilroy Structural Steel Co.

of Cleveland, Ohio, who installed a 5-ton Robbins & Myers enclosed cab traveling crane to handle raw steel and prefabricated components in their storage yard three years ago. When they needed another crane —they simply reordered "R & M".

Moving 125 tons of steel is an ordinary days work for this R & M team, and in a recent 3-day period, with assists from 16 two-ton hoists inside the plant, handled 400 tons of steel from raw stock through fabrication and to transport for the customer!

Kilroy's manager, Mr. McGreal, says R & M equipment gives lower cost, fast, efficient handling;—stays on the job with only routine maintenance despite rugged all weather use. Even if your biggest load never tops 500 lbs. it will pay you to take it up with Robbins & Myers. Your nearby R & M representative has full details on time and cost saving overhead handling that will successfully answer your needs. Write for Bulletin No. N32D.

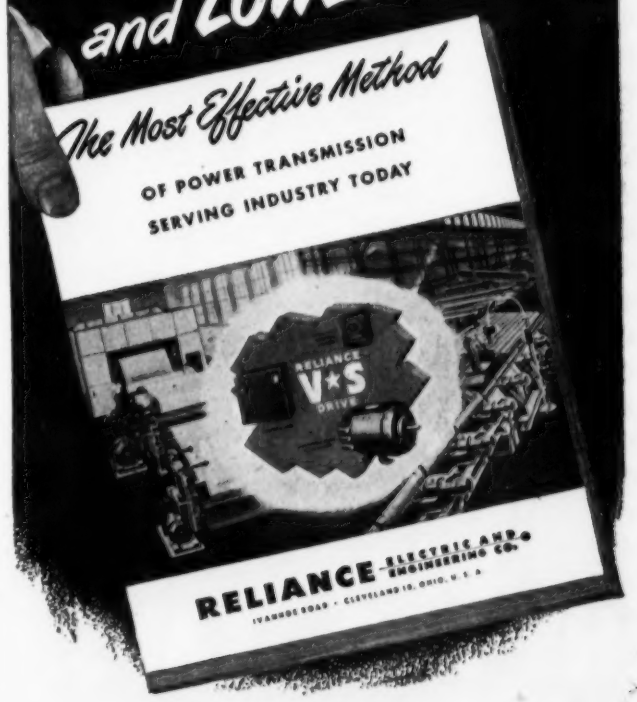
TAKE IT UP WITH

ROBBINS & MYERS INC

HOIST AND CRANE DIVISION, SPRINGFIELD 99, OHIO
For more details circle NED-2303 on enclosed inquiry slip

Here's NEW data on Industry's proven way to

INCREASE PRODUCTION and LOWER COSTS



Contact your nearest Reliance Sales Representative or write us direct for your copy of this new Bulletin D-2311 on Reliance V★S, the all-electric, adjustable-speed drive for A-c. circuits. Describes V★S features and characteristics, shows typical V★S applications.

RELIANCE ELECTRIC AND ENGINEERING CO.
1082 IVANHOE ROAD • CLEVELAND 10, OHIO

Sales Representatives in Principal Cities

For more details circle NED-2304 on enclosed inquiry slip

NEW

Fan Catalog for '52... EMERSON ELECTRIC'S COMPLETE LINE!

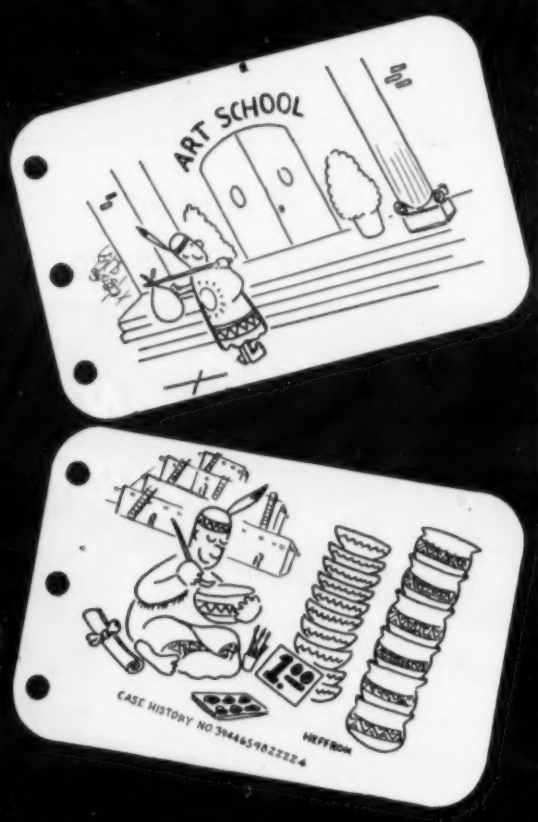
Again it is the most complete fan line in America . . . fans for every commercial, industrial and domestic use. See them all in the new catalog for '52. Write Dept. T-45.

THE EMERSON ELECTRIC MANUFACTURING CO.
St. Louis 21, Mo.

EMERSON ELECTRIC
FANS • MOTORS APPLIANCES

For more details circle NED-2305 on enclosed inquiry slip

INGENUITY
can solve any problem



if YOUR PROBLEM involves the higher production of threaded parts

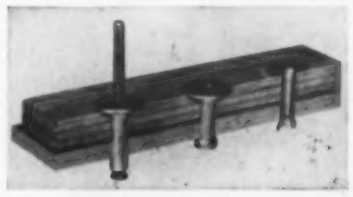
HY-PRO TAPS can help you to a solution

HY-PRO TOOL CO.
NEW BEDFORD, MASS. U. S. A.
Subsidiary of Continental Screw Co.

Order from your distributor or call the HY-PRO SALES ENGINEER

For more details circle NED-2306 on enclosed inquiry slip

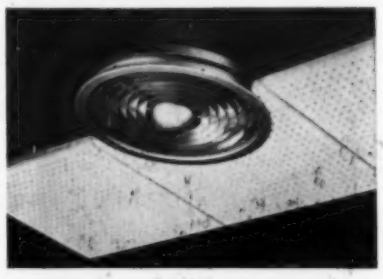
BLIND RIVETS provide large bearing area



Added to line of permanent fasteners are these low silhouette, large diameter head, blind rivets. They provide large bearing area when fastening thin or soft materials, such as foil, plywood linings or floors, Masonite or Bristol board panels and insulation to metal frameworks. Installation can be from one side of work. Rivets are available in both aluminum and steel, in either pull-through (R949) or self-plugging (R974) types and in 1/8, 3/16 and 1/4-in. diameters. Made by **Huck Mfg. Co.**, 2482 Bellevue Ave., Detroit 7, Mich.

For more details circle NED-2307 on enclosed inquiry slip

SPOT OR FLOOD LIGHT mounts directly in ceiling

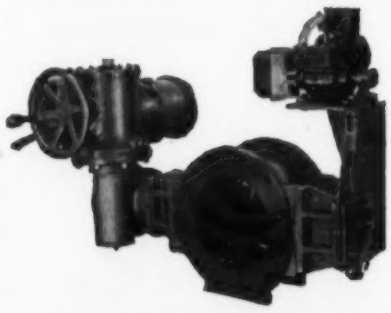


Using standard 100-w A-21 silvered-bowl lamp, Silver-spot is all-purpose glare-free incandescent down-light for either spot-light or floodlight distribution. Readily maintained and installed, it is available for both recessed and surface mounting applications. Light projection is controlled by reflector. Light source is concealed from all viewing angles, with louvers providing 45-degree shielding of reflector for glare elimination and low brightness on louver. Made by **Silvray Lighting Inc.**, 106 W. Main St., Boundbrook, N. J.

For more details circle NED-2308 on enclosed inquiry slip

DUAL-PURPOSE VALVE for elevated or subzero temperatures

Designed for either high pressure drop and small volume or low pressure drop and large volume, No. 818 cast iron valve consists of 12-in. beveled vane which seats against body side wall with 4-in. vane mounted in center of larger vane. Valve is employed in turbine bypass line for controlling required quantity of water when turbine is not in use or when it is operating at reduced capacity. It is equipped with 18-8 shafts, bronze bushings and two lubricated stuffing boxes with two outboard bearings. Both vanes are motor operated. Various combinations of sizes for elevated or subzero temperatures and with manual or automatic control are available. Made by **R-S Products Corp.**, 4500 Germantown Ave., Philadelphia 44, Pa.



For more details circle NED-2309 on enclosed inquiry slip

New THERMALINK
Automatic Electric
OIL PRE-HEATING UNITS

★ Integral adjustable thermostat eliminates wiring problems.
★ Adjustable temperature dial marked in degrees.
★ Available with both thermostat and motor control built into unit.
★ No relays or auxiliary controls needed.
★ Available with pipe-thread or flange header.
★ Wattages from 1000 through 7500.
★ Conservative watt-densities prolong life, minimize carbonization.

WRITE DEPT. N FOR DATA SHEETS PRS-152 & FRS-152

ELECTRO-THERM INC. • SILVER SPRING, MD.

For more details circle NED-2310 on enclosed inquiry slip

ROTO FINISH

GIVES YOU 5 OUTSTANDING ADVANTAGES for Deburring, Descaling and Finishing Operations

1. Eliminates tedious hand filing, scraping, polishing, deburring, etc. to save many man hours.
2. Provides absolute uniformity in quantity lots.
3. Maintains exacting tolerances on precision parts where no dimensional change is allowable.
4. Imparts a finish mechanically that was formerly considered possible only by hand methods.
5. Low initial cost — requires minimum maintenance. No exhaust systems required.

Send for free catalog.

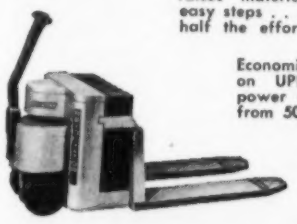
Roto-Finish COMPANY
associated with The Sturgis Products Co.
3702 MILHAM RD., KALAMAZOO, MICHIGAN
ORIGINATORS OF THE ROTO-FINISH PROCESSES

For more details circle NED-2311 on enclosed inquiry slip

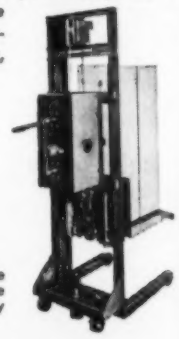
Lift for less Handle for less

Find out specifically why . . . how. Study these models. Get REVOLVATOR prices, load capacities, performance data . . . convincing evidence on how you can lower cost-per-load; handle loads easier, faster, safer.

Powerfull Double Stroke RED GIANT LIFTRUCK raises materials in two easy steps . . . needs only half the effort.



Economicall Double cable on UPLIFTER to double power — change capacity from 500 to 1000 lbs.



Finger Tip Control. GO GETTER Pallet Type LIFTRUCK with the strength of a gang of men raises load four inches in only 4 seconds, lowers gently, quietly.

Designers and Manufacturers of Materials Handling Equipment Since 1904

WRITE US:
8732 Tonnele Ave.
North Bergen, N. J.

REVOLVATOR CO.

For more details circle NED-2312 on enclosed inquiry slip

Quick Switches are a DAVEN Specialty

And the "specialty of the house" is double-barreled . . . first, choose from hundreds of standard units to satisfy your needs—for quick switch delivery . . . second, Daven can effect quick 'switches' or changes from standard units to special switches, by using components at hand. That, too, makes for speed, dependability, economy. Write for more detailed data.

THE DAVEN CO. 199 Central Ave. Newark 4, N. J.

For more details circle NED-2313 on enclosed inquiry slip

For **STRENGTH** specify

TRI-LOK

RECTANGULAR

OPEN STEEL FLOORING

The locked-in strength of Tri-Lok enables it to stand up under heavy loads—even on long spans. Get maximum strength, air and light with minimum weight.

Tri-Lok is also available in Diagonal, or Super-Safety U-type Flooring, and in Stair Treads of all types. Write for Bulletin NK-1103.

The Tri-Lok Company is also equipped to furnish *riveted* and Tri-Forge *welded* open steel flooring. Tri-Lok can be furnished in a variety of metals, including aluminum alloy, stainless steel, etc.

DRAVO CORPORATION
National Distributor for the Tri-Lok Company
Dravo Building, Pittsburgh 22, Pennsylvania
Sales Representatives in Principal Cities

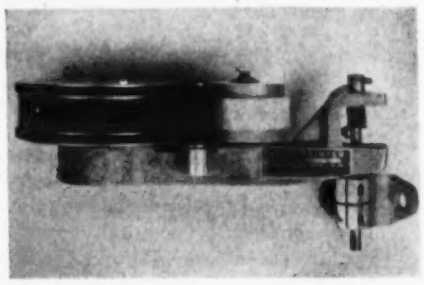
DRAVO

▲ For more details circle **NED-2314** on enclosed inquiry slip ▲

CODE, DATE and MARK AUTOMATICALLY on your *CONVEYOR LINE* with the "WHIPPET" MARKER

The "Whippet" marks filled bags, cartons, boxes, rolls, cans, etc. with quickly interchangeable rubber type. Inking is through a felt roller that has self-contained reservoir. No installation problems—readily adaptable to your present conveyor system.

The "Whippet" Marker is just one of Industrial's coding and marking machines designed for more efficient marking and movement of materials on production lines. Let us help you with your problems—write today. "FREE" Catalog upon Request.



THE INDUSTRIAL MARKING EQUIPMENT COMPANY, INC.
454 Baltic Street, Brooklyn 17, N.Y. Dept. N.E.D.
Phone MAin 4-2601

▲ For more details circle **NED-2315** on enclosed inquiry slip ▲

HERE'S DUO-SAFETY'S TWO-SIDED . . . ALL ALUMINUM MAINTENANCE LADDER

TYPE AL2C

Double Size Platform

Especially Sturdy Spreader

A. Angle Clip Brace.
B. Serrated, Reinforced Step.
C. Angle Brace.

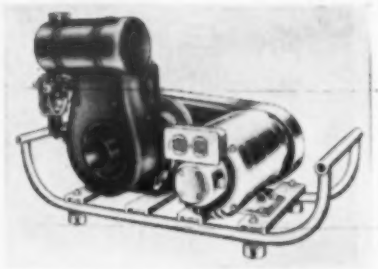
A new ladder in the famous Duo-Safety line of strong, sturdy, aluminum industrial ladders. Has a double climbing side, large top platform, rubber safety boots, light, strong aluminum construction. Ideal for all types of overhead maintenance work including use with extension planks. Available in sizes from 3 to 16 feet and is collapsible for storage in a limited space.

Free, Colorful File Catalog . . . Sent on Request

DUO-SAFETY LADDER CORP.
811 NINTH ST. OSHKOSH, WIS.

▲ For more details circle **NED-2316** on enclosed inquiry slip ▲

GAS-DRIVEN GENERATOR
portable unit made in three ratings



Suited to requirements of contractors, flood lighting systems, emergency repair trucks and portable power tools, model 1800 portable gas-driven electric generators are available in three ratings: 1000, 1250 and 1350 w at 115 v 60 cycles ac. Conservatively rated, they are equipped with sealed ball bearings. Belted construction cushions shock to generator, reduces vibration and increases generator life. Unit has universal mounting base which will accommodate any of several makes of engines. Generating unit can be purchased with or without engine and mounting base. Made by **Wincharger Corp.**, 2101 E. Seventh St., Sioux City 2, Iowa.

▲ For more details circle **NED-2317** on enclosed inquiry slip ▲

TOGGLE SWITCH
rated at 20 amp, 125 v

Features of 5000 series of single and double pole and three-way toggle switches include strong Bakelite cup riveted to strap, top wiring with large terminals to take up to No. 10 wire, wiping contacts with snuffer action and wide plaster ears. Close-fitting toggle is clearly marked and is offered in brown or ivory. Screws are at angle for easy wiring. Switch, rated at 20 amp 125 v or 10 amp, 250 v, is listed as standard by Underwriters' Laboratories. Made by **Leviton Mfg. Co.**, 236 Greenpoint Ave., Brooklyn 22, N. Y.

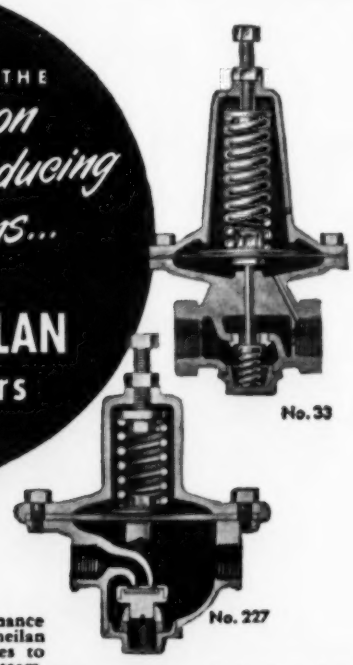
▲ For more details circle **NED-2318** on enclosed inquiry slip ▲

DOUBLE PULSE GENERATOR
each pulse individually variable

Amplitude and width of single or double pulses produced by model 903 double pulse generator are each continuously and individually variable. Spacing between pulses is controlled by calibrated front panel knob. Suited for designing and testing amplifier circuits, gating and gated control circuits, high speed scalers and wide band amplifiers, unit can produce either positive or negative pulses. Negative amplitude is variable from 200 v maximum into 1000-ohm load and 10 v maximum into 50-ohm load. Amplitude of positive pulses is variable from 50 v maximum into 1000-ohm load and 2.5v maximum into 50-ohm load. Separation of pulse pairs is continuously variable from 0 to 10 microseconds. Pulse rise time is 0.035-microsecond and delay time is less than 0.15-microsecond. Repetition of single pulses or pulse pairs is controllable from 1 to 1000 pulses per second. Made by **Berkeley Scientific Corp.**, Dept. NED, 2200 Wright Ave., Richmond, Calif.

▲ For more details circle **NED-2319** on enclosed inquiry slip ▲

HOW TO PUT THE *"Freeze" on Pressure Reducing Problems...* USE **MASONEILAN** Regulators



Production and maintenance men can count on Masoneilan Pressure Reducing Valves to give accurate control of steam, water or air. Constructed to high quality standard, they give long-lived service... require minimum of maintenance because they are *built up to the job* not down to price.

No. 33 for steam or air service — sizes from ½" to ¾". Reduced pressure ranges 2-20; 20-40; 40-100 psi. Maximum working pressure 200 lbs.

No. 227 for water service — sizes ¼" to 2". Reduced pressure ranges 10 to 60 psi. Maximum working pressure 150 psi. Also available for air service from ¼" to 1".

Your local Mason-Neilan Industrial Distributor is Ready to serve you from stock; or Write —

Mason-Neilan Regulator Company
2189 ADAMS STREET, BOSTON 24, MASS., U.S.A.

▲ For more details circle **NED-2320** on enclosed inquiry slip ▲

Here Lies a Good Conveyor Belt ...killed by OCS*

—BWH ROTOCURE prevents these fatalities—look for it in the belts you buy

When you buy a BWH conveyor belt made by the *continuous* ROTOCURE process of vulcanization you obtain a *uniformly strong* belt *overall.* The weakened segments due to overlapping that sabotage operations and inflate belting costs are completely eliminated. With continuous, endless vulcanization you will be ahead 4 ways:

1. In increased belt flex life — as much as 40%
2. In elimination of mechanical distortion at the press ends
3. In constant, uniform stretch
4. In uniform, abrasion-resistant covers

Ask your BWH distributor to show you how these highly serviceable belts can help you. Or write us direct.

Another Quality Product of

BOSTON WOVEN HOSE & RUBBER CO.
Distributors in all Principal Cities
Plant: Cambridge, Mass. • P. O. Box 1071, Boston 3, Mass., U. S. A.
Warehouse Stock, 111 North Canal St., Chicago, Illinois

▲ For more details circle **NED-2321** on enclosed inquiry slip ▲

PORTABLE GRINDING COSTS GO DOWN WITH...

NORTON WHEELS That Hug That Work!

FASTER GRINDING, LONGER WHEEL LIFE, AND LESS OPERATOR FATIGUE give you the benefits of more metal ground per man-hour and lower wheel cost when you use Norton portable grinding wheels. *They hug that work!* Less vibration . . . less bounce.

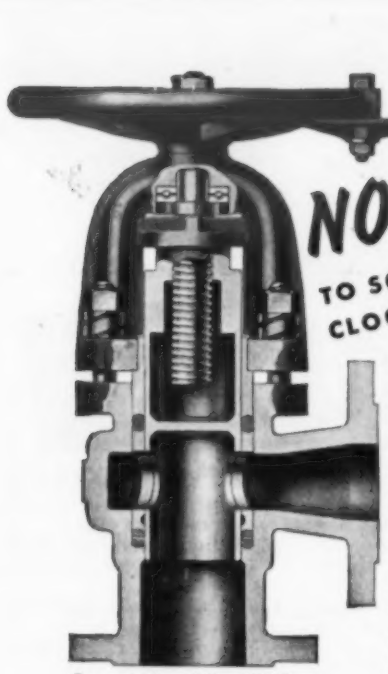
This more continuous contact with the work comes from *controlled uniformity* and *built-in balance* which Norton production engineers have recently developed to a degree never before attained.

Ask your nearby Norton distributor about new, improved Norton portable grinding wheels. He's listed under "Grinding Wheels" in your classified telephone directory. Or write direct to Norton Company, Worcester 6, Mass. Distributors in all principal cities.

NORTON ABRASIVES

Making better products to make other products better

▲ For more details circle **NED-2322** on enclosed inquiry slip ▲



NO SEAT!

TO SCORE...WEAR... CLOG...AND LEAK

The Yarway Seatless Blow-Off Valves eliminate the commonest source of trouble and expense with ordinary blow-off valve operations.

The famous seatless principle first introduced nearly 40 years ago, has been constantly improved and adapted to meet modern service requirements.

There is a Yarway Blow-Off Valve for every pressure.

SEND FOR FREE BLOW-OFF VALVE BOOKLET. PLEASE STATE YOUR BOILER PRESSURES.

Cross section of Type "B" Seatless Angle Valve, Flanged.

YARNALL-WARING COMPANY
131 Mermaid Ave., Phila.18, Pa.

YARWAY BLOW-OFF VALVES

▲ For more details circle NED-2323 on enclosed inquiry slip ▲

Lincoln

BULLNECK* FITTINGS

The Only Complete Line of Grease Fittings with THE BALL-IN-THE-HEAD

SEALS DIRT OUT ... GREASE IN

Throat of Ordinary Hydraulic Fittings Clog with Dirt and Grit

Look at these Construction Features

FOUND ONLY IN LINCOLN BULLNECK* FITTINGS...*AT NO EXTRA COST!*

1. **Flush Ball Check**—Head can be wiped clean without forcing dirt into fitting and into bearing.
2. **Large Grease Passage**—The larger internal diameter permits greater flow of lubricant.
3. **Special Spring Design**—Spring cannot be compressed to restrict flow of the heaviest lubricants.
4. **Sturdier Construction**—Enlarged neck size and projecting locking pad protect against damage and wear.

BULLNECK* FITTINGS Are Available in the Complete Range of Types and Thread Sizes

Write for Additional Information and Catalog, or Contact Your Nearby Lincoln Sales Office

BOSTON, MASS. H. G. Davis, Inc. 8 St. Mary's Street Kenmore 6-5175
BRIDGEPORT, CONN. H. G. Davis, Inc. 195 Dewey Street Bridgeport 5-8160
CHICAGO, ILLINOIS Lincoln Eng. Co. of Ill. 2415 S. Michigan Avenue Calumet 5-6022
CLEVELAND, OHIO Lincoln Lub. Systems, Inc. 4500 Euclid Avenue Express 1-4334
DETROIT, MICH. Lincoln Engineering Co. 3627 Woodward Avenue Trinity 5-3484
EAST ORANGE, N. J. Lincoln Lub. System, Inc. 18 Central Avenue Orange 3-3188
FORT WORTH, TEXAS Fritz Keller P. O. Box 9008 Sunset 5451
LOS ANGELES, CALIF. Lincoln Eng. Co. of Calif. 2844 S. Grand Avenue Richmond 0151
MILWAUKEE, WISC. Lincoln Equipment Co. 1618 West Wells Street Division 2-1191
LONG ISLAND, N. Y. Lincoln Lub. Systems, Inc. 48-14 36th Street Ravenswood 9-2529
BERKELEY, CALIF. Lincoln Eng. Co. of Calif. 3033 San Pablo Ashberry 3-6726
PAWTUCKET, R. I. H. G. Davis, Inc. 587 Pawtucket Avenue Pa. 2-7400
PHILADELPHIA, PA. Lincoln Engineering Co. 3117 N. Broad Street Radcliff 5-8900
PITTSBURGH, PA. Lincoln Engineering Co. 134-36 S. Whitfield Montrose 1-1444
PORTLAND, OREGON Pioneer Equipment Co. 1018 S. E. 8th Avenue Empire 0488

• • • PIONEER BUILDERS

*Tradename Registered

LINCOLN LUBRICATING EQUIPMENT • • •

LINCOLN ENGINEERING CO., 5782 Natural Bridge Ave., St. Louis 20, Mo.

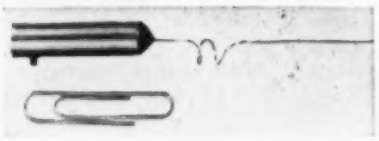
▲ For more details circle NED-2324 on enclosed inquiry slip ▲

PRINTING & ADDRESSING KIT for postcards, forms and tags

Machines and all supplies required to print and address postcards, announcements, shipping tags, price cards, forms and notices are contained in carrying case about size of tackle box. Basic units in Dupli-Kit are portable printer and portable addresser. Printer accommodates low cost stencil on which messages can be typed, written or drawn. Automatically inked, it prints in perfect register. Addresser utilizes roll or paper on which up to 250 addresses are typed. Multiple rolls can be used for longer lists. With single, one-hand motion, address is "rolled on." Each roll of names can be used for 100 or more impressions. Made by **Heyer Corp.**, 1890 S. Kostner Ave., Chicago 23, Ill.

▲ For more details circle NED-2325 on enclosed inquiry slip ▲

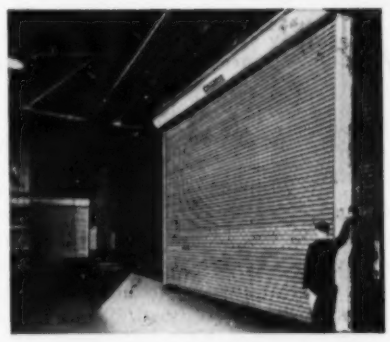
MINIATURE THERMOSTAT has adjustable temperature setting



Manufactured with temperature range from −50 to 350° F, this miniature metal-enclosed thermostat is adjustable plus or minus 60° F from its original factory setting. Stability is achieved by use of ceramic bushing to anchor bimetal and by separate phosphor bronze spring which carries moving contact. Separate contact spring prevents bimetal from taking a set or becoming overstressed by extreme contact pressure. Contacts are rated at 1 amp, 115 v ac or 0.5-amp, 115 v dc. Shell length is 1¼ in. and diameter is about 5/16-in. Made by **Thomas A. Edison, Inc.**, Instrument Div., West Orange, N. J.

▲ For more details circle NED-2326 on enclosed inquiry slip ▲

SLAT TYPE ROLLING DOOR now has plastic lookout windows

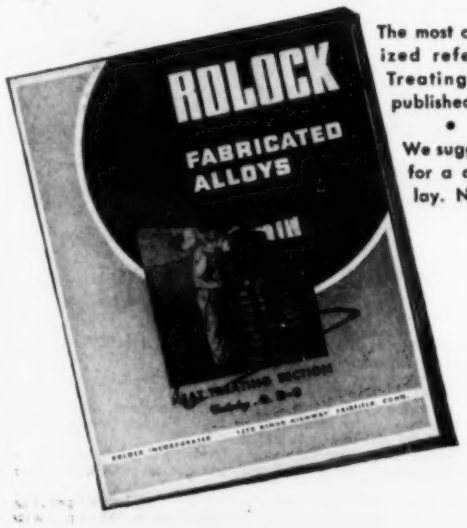


Lookout windows of narrow, transparent heavy-duty plastic are now available in one or more of the interlocking steel slats of the Kinnear slat-type rolling door. Window slats allow entry of daylight, or placed at or near eye level, facilitate viewing anyone waiting to enter before door is opened. Rolling doors are constructed of steel interlocking slats, heavily galvanized, and equipped with end locks that maintain alignment. Doors can be any reasonable size and equipped for manual, mechanical or motor operation, with remote control from any number of electric pushbutton stations. Made by **Kinnear Mfg. Co.**, 3017 Fields Ave., Columbus 16, O.

▲ For more details circle NED-2327 on enclosed inquiry slip ▲

ROLOCK FABRICATED ALLOYS

HEAT AND CORROSION RESISTANT



The most complete, specialized reference on Heat Treating applications yet published.

• • •

We suggest that you send for a copy without delay. No obligation.

ROLOCK, INC.
1412 KINGS HIGHWAY, FAIRFIELD, CONN.

▲ For more details circle NED-2328 on enclosed inquiry slip ▲

ENDS ALL SLIPPING HAZARDS in a County of San Diego Hospital!

PABCO GRIP-TREAD MASTIPAVE

Non-Slip—Wet or Dry

AMERICA'S No. 1 LOW COST LONG-LIFE FLOOR COVERING

"Before we installed Pabco Grip-Tread Mastipave" says D. R. Sloan, Superintendent, Edgemoor Farm, County of San Diego, California, "we had considerable trouble with fractures due to patients slipping on concrete floors. Mastipave has entirely eliminated these accidents. For this feature alone, Mastipave has paid for itself.

"The nurses and attendants speak very highly about Grip-Tread Mastipave, especially its ease and comfort underfoot. Low maintenance cost is a big factor, as once Mastipave floors are waxed, very little attention need be given them."

EVERY BUILDING NEEDS PABCO MASTIPAVE

For 25 years, the Nation's blue chip industries, public carriers, hospitals, public school systems have demonstrated that Pabco Mastipave costs little, looks good, wears even better! Grip-Tread is sold in roll goods only—regular Mastipave is available in roll goods and tiles.

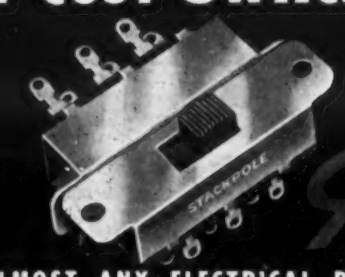
SEND NOW FOR THE FULL STORY OF MASTIPAVE!

(Mail to Dept. L, nearest office)

PABCO PRODUCTS, INC.
New York 16 Chicago 54 San Francisco 19

▲ For more details circle NED-2329 on enclosed inquiry slip ▲

LOW COST Switches



FOR ALMOST ANY ELECTRICAL PRODUCT

16 STANDARD DESIGNS

INCLUDING 3 AMP. SLIDE SWITCH TYPES

Priced low, ruggedly made, Stackpole slide switches are ideal for toys, radios, phonographs, automobiles, and electrical appliances and equipment of all types. 1 to 6 pole types, up to 4 positions, optional detent, spring return, covers and other features. Write for Bulletin RC-7C.

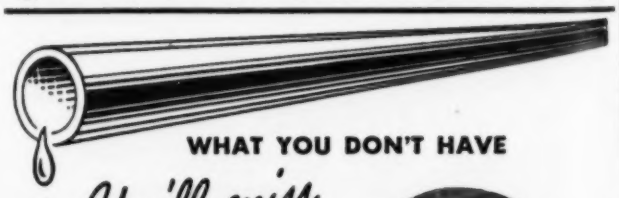
STACKPOLE CARBON CO., St. Marys, Pa.

STACKPOLE

OTHER STACKPOLE PRODUCTS:

Motor Brushes • Electrical Contacts • Permanent Magnets • Fixed and Variable Resistors • Iron Cores and dozens of molded carbon and graphite specialties • Ceramag®

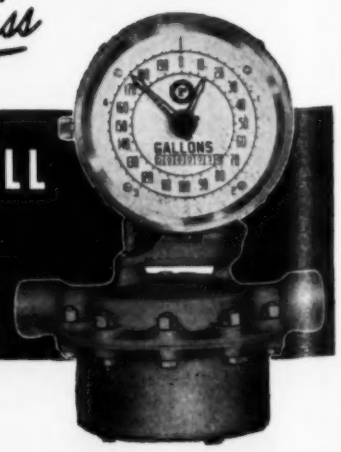
▲ For more details circle NED-2330 on enclosed inquiry slip ▲



WHAT YOU DON'T HAVE

You'll miss

ROCKWELL *Industrial* METERS



Control

FORMULAS, COSTS, INVENTORIES OF ALL LIQUID STOCKS

Rockwell meters are lastingly accurate guardians, wherever liquids are stored, transported or utilized. You can install them with profit when batch mixing formulas, for inventory records, for cost control. There's a size and type for every need. Write for bulletin.

ROCKWELL MANUFACTURING COMPANY

DEPT. C-2, 400 N. LEXINGTON AVE., PITTSBURGH 8, PA.

▲ For more details circle NED-2331 on enclosed inquiry slip ▲

NEW JACK LOCATES ON ANCHOR BOLT

Empco JACK STYLE JS

- SELF-ALIGNS TO UNEVEN FLOOR
- EASILY LIFTS 8,000 LBS.
- SIMPLY TURN ADJUSTING NUT TO RAISE OR LOWER MACHINE
- VI-SORB MOUNTING PADS ABSORB VIBRATION

Where anchor bolts are used, this new Empco Jack Style JS will save considerable time in setting and keeping equipment level.
Tested to support 20 tons and lift 8,000 lbs., this Empco Jack is the answer to any machine installations. Anchor bolt hole through the jack assembly allows clearance for ¾" diameter bolt. This permits the Empco Style JS Jack to be used at the *precise spot* where equipment was designed to be best supported.
Available in three sizes: 1¾", 2", and 3" (minimum heights) with VI-SORB mounting pads as optional equipment.
Write for specifications and prices of complete line of Empco Leveling Jacks.

EMPCO PRODUCTS

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVENUE • DETROIT 12, MICHIGAN

For more details circle NED-2332 on enclosed inquiry slip

pick up YOUR profit with TORNADO® CLEANING

Motor unit removes to become portable blower for cleaning electric motors and machinery.

Motor unit plus Pac-Vac attachments makes your Tornado into a shoulder-type vacuum for stairs and overhead work.

No, we don't mean that someone has been sprinkling your floors with cash. It's nothing as obvious as that—we mean that you may be wasting many dollars on your floors and other cleaning operations if you are not using *Tornado Cleaning*.

Tornado vacuum cleaners have been helping industrial plants and commercial establishments to do their cleaning faster, more thorough and at a substantial savings.

In addition to conventional vacuuming of all floors, Tornado picks up metal chips, water, oil and scrubbing solutions. Versatile attachments clean walls, acoustical ceilings, overhead fixtures and shop equipment. The motor unit is also removable for a shoulder-type vacuum or a portable high velocity blower.

Actually—Tornado is 4 valuable cleaning tools in one powerful machine that means savings—plus profits to you. It's all described in our bulletin 600, yours for the asking.

BREUER ELECTRIC MFG. CO.
5116 N. RAVENSWOOD AVE., CHICAGO 40, ILLINOIS

For more details circle NED-2333 on enclosed inquiry slip

PORTABLE HYDRAULIC CRANE
in one and two-ton capacity models

Series TM Mobilcrane hydraulic crane is of welded girder construction with square members and is operated by hand pump. Hydraulic lifting mechanism is single unit pump with variable speed which can be removed or reconditioned as easily as automobile jack. Built-in check valve prevents sudden lowering of load. Available in 1 and 2-ton capacities with low and high mast styles, crane has optional accessories such as drum or crate stacking attachment, telescoping boom extension and cradle for moving transmissions and dual wheels into place. Another model has revolving base instead of legs and can be used on truck, shipping platform or in shop as movable chain hoist for loading heavy material. Made by **Lempco Products, Inc.**, 5498 Dunham Rd., Bedford, O.

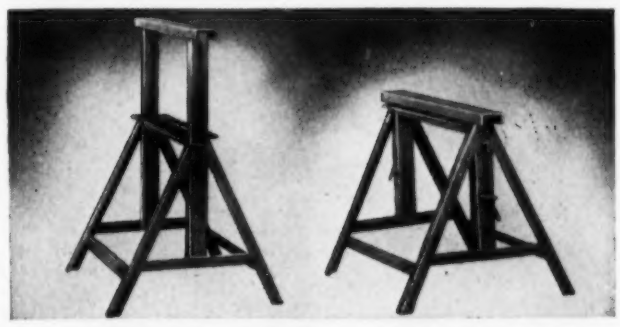
For more details circle NED-2334 on enclosed inquiry slip

PORTABLE RECORDER
records and plays back full hour of speech on single vinylite disk

Portable model P16-450 Wagner-16 MicroDisc recorder is professional instrument which can record and play back full hour of speech on single unbreakable vinylite 4¾-in. diameter disk operating at 16 rpm at pitch of 448 lines per inch. MicroDisc contains 30 minutes of program material on each side and is used primarily in reference, closed circuit and conference work, although reproduction fidelity is good with music material. Design of non-turntable type disk drive minimizes flutter, wow and distortion of bass frequencies, enabling extended bass response.

Recorder also features spiralling and magic-eye volume-level indicator. Recording time reference scale operates automatically. Two switch-selected input receptacles, one for microphone and other for bridging, are provided. Equipment operates from 115-v 60 cycle ac and is available for 50-cycle operation. With 11½ x 14¼ x 9¾-in. carrying case, recorder weighs 28 lb including accessories. Complete unit includes all styli (sapphire), microphone, PM loudspeaker, extra input plugs and instruction manual. Made by **Audio & Video Products Corp.**, 730B Fifth Ave., New York 19, N. Y.

For more details circle NED-2335 on enclosed inquiry slip



EVERY PLANT CAN USE ADJUSTABLE STEEL HORSES

They are the "work horses" in every plant or shop . . . more than pay for themselves, and are never idle because of the many uses their ready adjustability will easily serve:

SPOT WELDING TABLES	SCAFFOLDING
FABRICATION SUPPORTS	CONVEYOR SUPPORTS
LAYOUT WORK	MAINTENANCE WORK
BENCHES	And many other uses

MODELS FOR HEAVY OR LIGHT WORK

Standard length 36". Low Height 24"; Extended Height 42". Adjustable at 1½" intervals. Held in position by steel lock pins. All units portable. Painted one coat chrome yellow.

IMMEDIATE DELIVERY
Write for full information

Bruno HANDLING EQUIPMENT
BRUMMELER STEEL PRODUCTS CORPORATION
1411 Ionia Ave. S. W., Grand Rapids, Michigan

For more details circle NED-2336 on enclosed inquiry slip

Only LINK-BELT "RC" FLEXIBLE COUPLING . . .

gives you single-chain simplicity plus divided rollers

YES, the exclusive design of Link-Belt "RC" Flexible Couplings combines these two desirable features.

The result: equalization of load, proper balance at high speeds . . . adjustment to reasonable misalignment and end float . . . simplicity and economy.

Link-Belt makes a complete line of Roller Chain Couplings from fractional to 1000 hp. You can get all the facts from Folder 2363.

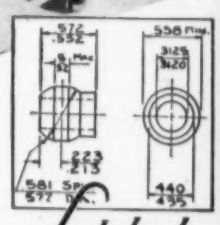
"RC" Couplings available in 30 sizes, ⅜ to 12 in. bore.

★ LINK-BELT "RC" FLEXIBLE COUPLINGS

LINK-BELT COMPANY: Chicago 8, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Springs (South Africa). Offices in principal cities. 12,528

For more details circle NED-2337 on enclosed inquiry slip

JOHNSON Self-Aligning BEARINGS REDUCE ASSEMBLY COSTS



Ledaloyl

Johnson Ledaloyl Bearings in numerous self-aligning styles are designed to slip into place and adjust themselves to shaft position. They require no machining, no fitting. They are produced by powder metallurgy and are self-lubricating. Catalog L-5 shows designs of items and lists sizes available from stock.

Write for your copy today.

JOHNSON BRONZE CO.
580 S. Mill St., New Castle, Pa.

JOHNSON B BEARINGS Sleeve-Type

For more details circle NED-2338 on enclosed inquiry slip

JUST PRINTED!

NEW SLIDE CHART MAKES HEAT TREATING EASIER

Enables you to find at a glance this heat treating information on Carpenter Matched Tool and Die Steels:

- Forging heat
- Normalizing heat
- Annealing treatment
- Hardening treatment
- Drawing ranges
- Effect of drawing temperature on hardness

Gives new, valuable data on speed of heating with 2 vital rules for better results, tips on quenching in water, brine, oil and air, estimating oxidizing atmospheres, heating time, etc. A "must" to help every toolmaker and heat treater get better results, today. Return coupon now for free, easy-to-use slide chart.

THE CARPENTER STEEL COMPANY
118 W. Bern Street • Reading, Pa.
Please rush to me at no obligation, new Carpenter Guide to *Simplified* Tool Steel Heat Treating.

NAME ..... TITLE .....
COMPANY .....
ADDRESS .....
CITY ..... ZONE ..... STATE .....
(PLEASE PRINT)

For more details circle NED-2339 on enclosed inquiry slip

"Buffalo" VOLUME FANS

FLEXIBLE—

EFFICIENT—DURABLE

Their rugged cast iron housings are resistant to heat and moisture—and are quickly adjustable to 8 DISCHARGE POSITIONS! Here's a truly *flexible* fan for scores of blowing and exhausting jobs in YOUR plant. Smooth running, on dust-proof ball bearings. WRITE TODAY for Bulletin 3615—put this all-around fan to work for you!

- For many CLEANING JOBS
- For DRYING
- For forge or furnace DRAFT
- For MATERIAL HANDLING
- For EXHAUSTING FUMES, DUST, ETC.

—up to 10" S. P.

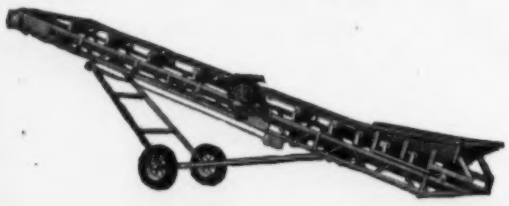
BUFFALO FORGE COMPANY
215 MORTIMER ST. BUFFALO, N. Y.
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

▲ For more details circle NED-2340 on enclosed inquiry slip ▲

Delivered PROMPTLY

A typical installation of Sectional Conveyor assemblies "Job-Fitted" to the efficient operation of this aggregate plant.

Today three major factors must be considered in the purchase of material handling equipment—performance, price and **delivery.** Baughman Sectional Hi Speed Job-Fitted Conveyor assemblies are built to meet these specifications. Each Baughman Sectional Conveyor is engineered, thoroughly tested and load rated, insuring satisfaction in every installation. Through quantity production of Sectional Conveyor Assemblies, it is possible to stock basic units, which insure prompt delivery at lower cost.



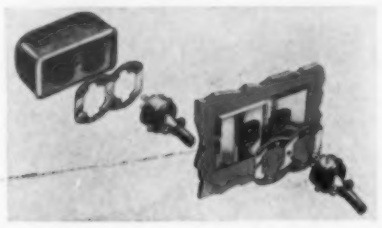
The same sectional assemblies and job fittedness is available in portable and permanent Baughman Conveyors. Speedy quotation, prompt delivery and shipment in most cases from stock, allow Baughman to offer immediate action to your inquiry.

Write for Free Catalog #A-57 or contact your nearest Baughman Industrial Distributor.

manufactured by
BAUGHMAN MANUFACTURING CO. Inc
175 E. ARCH STREET JERSEYVILLE, ILL.

▲ For more details circle NED-2341 on enclosed inquiry slip ▲

LOCKING ELECTRIC PLUG
adaptor fits twin receptacle



Positive, simple locking device prevents Lock-Plug from being accidentally removed from electrical outlet. Heavy metal adaptor plate with locking slots fits directly over standard twin receptacle plate and is held in place with center screw. Plug has sliding collar equipped with lugs to fit slots in adaptor plate. Slight twist of plug holds it firmly in place until released by operator. Made by **Hopax Electric, Inc.,** Dept. NED, 547 Greenwich St., New York 13, N. Y.

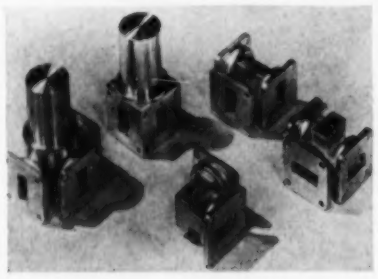
▲ For more details circle NED-2342 on enclosed inquiry slip ▲

POWER SUPPLY
voltage variable from 0 to 3 v

Good regulation, high stability, low ripple content and low output impedance are features of model 3100 standard voltage regulated power supply. Direct current output voltage is continuously variable from 0 to 3 v at from 0 to 100 milliamperes. In range from 0 to 3 v output, voltage variation is less than 5 millivolts under conditions of line fluctuation from 105 to 125 v and load variation from 0 to 100 milliamperes. Ripple is less than 1 millivolt. Unit is designed for relay rack mounting or bench use and measures 11 x 19 x 7 in. Made by **Kepco Laboratories, Inc.,** 131-38 Sanford Ave., Flushing 55, N. Y.

▲ For more details circle NED-2343 on enclosed inquiry slip ▲

MICROWAVE COMPONENTS
for radar and communication uses



Developed for use in radar, telecommunications, microwave experimentation and similar research or production applications, line of specialized microwave components has low absorption and reflection losses over 10 per cent band width. Typical units include high efficiency waveguide switch, compact 'twist and turn' elbow, improved broadband shunt and series tees. Aluminum construction minimizes weight for airborne uses, and all units can be used in pressureized systems. Photo shows, in clockwise rotation from left, microwave switch of waveguide construction, microwave switch of solid block construction, shunt and series tees and 'twist and turn' elbow. Facilities are available for development of components to fulfill specific systems requirements. Made by **General Precision Laboratory, Inc.,** Dept. 3, 63 Bedford Rd., Pleasantville, N. Y.

▲ For more details circle NED-2344 on enclosed inquiry slip ▲

Motor Driven 3/16" Orbital Motion

$34.50

Sands
Cleans
Smooths
Polishes

Three 4½" x 6½" coverings cut from standard 9" x 11" abrasion sheet.

Makes a hundred tedious jobs fast and easy. Will sand to the bare wood or metal, featheredge, or smooth and polish to a "piano finish." Powerful direct-connect, 3450 r.p.m. 110 v., A.C. air-cooled motor. No gears, nor gear-housing to collect grit and dust. Sealed ball-bearing thruout. Cast-aluminum body and chrome plated—in hand weight only 5 lbs. Natural grip, all-position handle with sliding thumb switch and 3 wire rubber-covered cord.

Speed Way MANUFACTURING CO.
1892 So. 52nd Avenue • Cicero 50, Illinois

▲ For more details circle NED-2345 on enclosed inquiry slip ▲

Rigid Quality Controls
GUARANTEE Better Weld Metal

• There's no room for guesswork in manufacturing Stainless Electrodes that will produce consistently high quality welds on every application. That's why the raw materials that go into Arcos Stainless Electrodes must meet rigid specifications . . . why every electrode must pass so many quality tests before it's put to use. It means complete assurance that the weld metal will be physically, chemically and metallurgically right for the job you want to do.

WELD WITH ARCOS
Stainless, Low Hydrogen and Non-Ferrous Electrodes

ARCOS CORPORATION
1500 South 50th St., Phila. 43, Pa.

▲ For more details circle NED-2346 on enclosed inquiry slip ▲

U.S. VARIDRIVE

GO MODERN with U. S. Varidrive, the miracle motor that changes to any selected speed, *instantly*. It can run slow, fast or at any speed in between, right to a split rpm. You don't have to change gears, shift belts or use a rheostat. Just turn a control dial. Entire unit is self contained, all on one base.

In countless instances the U. S. Varidrive Motor has paid for itself within a few weeks by stepping up output. Our bulletin tells you why.

2 to 10,000 rpm—¼ to 50 hp

U.S. ELECTRICAL MOTORS Inc.
(Box 2058) Los Angeles 54, California
or Milford, Conn.

▲ For more details circle NED-2347 on enclosed inquiry slip ▲

This free booklet tells why

DISSTON

can make your

SPECIAL STEEL PARTS

. . . accurately . . . economically!

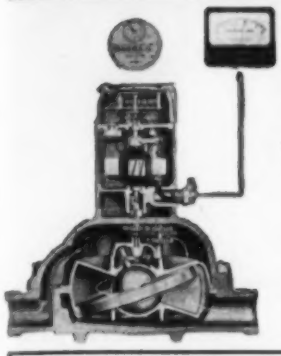
In this booklet are pictured the completely integrated production facilities of the DISSTON CUSTOM PARTS PLANT . . . from skilled engineering . . . through actual steel manufacture and heat treating . . . to final precision machining and inspection.

These facilities are *yours* to use—to cut costs and eliminate headaches in the production of replaceable heat-treated parts to your own exacting specifications. The booklet also illustrates typical parts the DISSTON CUSTOM PARTS PLANT has produced for other manufacturers and outlines the information required when forwarding an inquiry or an order. Send for it today! No obligation, of course.

HENRY DISSTON & SONS, INC.
329 Tacony, Philadelphia 35, Pa., U.S.A.
(Canadian Factory: Toronto 3, Ont.)

▲ For more details circle NED-2348 on enclosed inquiry slip ▲

Remote indication and control of liquid flow



Hays VERIFLOW meter accurately measures, indicates, and totals the flow of corrosive and hard-to-meter liquids without using weigh tanks, orifice plates, or gage sticks.
With the Hays VERITROL you simply set a knob at the rate of flow desired . . . then, the VERITROL *controls* the flow of liquid at that set-rate.

for corrosive liquids
Acetic Acid, Aluminum Potassium Sulphate, Ammonia, Calcium Compounds, Carbolic Acid, Formaldehyde, Fruit and Vegetable Juices, Hydrogen Peroxide, Phosphoric Acid, Potassium Hydroxide, Sodium Compounds, Sulphuric Acid (concentrated), Stearic Acid, and many others

Send for a complete description of Hays Veriflow Meter and Veritrol. Bulletin 48-766

THE **HAYS** CORPORATION
MICHIGAN CITY 15, INDIANA

▲ For more details circle **NED-2349** on enclosed inquiry slip ▲

GREATER ECONOMIES

THE NEW *Thermalite* overload indicator points the safe, practical way to greater transformer performance. Because it allows you to load check your distribution system visually and inexpensively, you may operate your transformers closer to their maximum safe overload limit. Use of the indicator helps prevent service interruption, costly maintenance and replacement due to burnouts.

Quiet in operation, low in cost, the *Thermalite* overload indicator lamp lights up brilliantly when a predetermined high oil temperature is reached and remains lighted until it is reset. This device does not interrupt customer service. Available in ratings 100 kva and smaller, 15 kv and below.

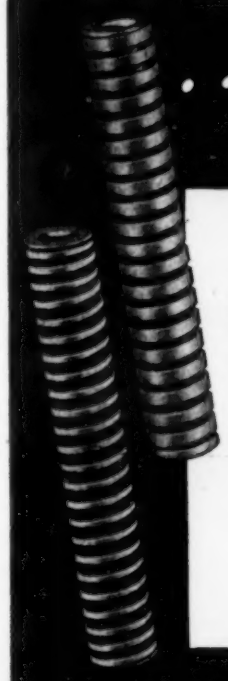
Why not write today for more facts. Allis-Chalmers, Milwaukee, 1, Wisconsin. A-3616

Thermalite is an Allis-Chalmers trademark.

ALLIS-CHALMERS

▲ For more details circle **NED-2350** on enclosed inquiry slip ▲

Simplify Die Design
. . . *Specify*



DANLY®

DIE SPRINGS

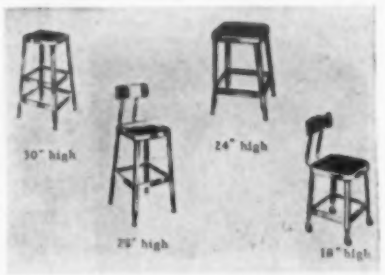
Two complete size ranges . . designed for medium pressure —high deflection or high pressure—medium deflection . . . meet specific die making needs more exactly! Write today for complete information. Ask for the Danly Die Spring Folder.

SEND FOR YOUR COPY TODAY

DANLY MACHINE SPECIALTIES, INC.
2100 South Laramie Avenue, Chicago 50, Illinois
PRECISION DIE SETS...TOOL, DIE AND GAGE MAKERS SUPPLIES

▲ For more details circle **NED-2351** on enclosed inquiry slip ▲

STEEL SHOP STOOLS
offered in 5 heights and 80 models



Designed for worker comfort, line of steel stools is comprised of five heights and eighty models. Steel or pressed wood seats are optional, and steel backs are available. Additional features include large square seat with rounded corners, welded construction, smooth edges to prevent snagging, strong channel brace which forms foot rest and tapered leg assembly to prevent tipping. Made by **Lyon Metal Products, Inc.**, 324 Clark St., Aurora, Ill.

▲ For more details circle **NED-2352** on enclosed inquiry slip ▲

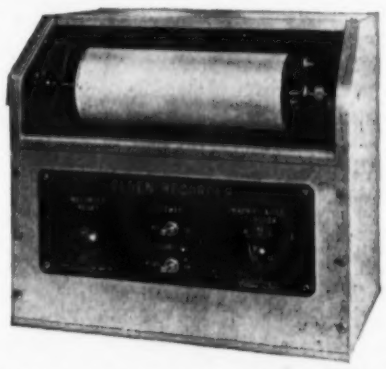
PLASTIC AWNINGS
supported by aluminum frames

Translucent, shatter-proof plastic in pastel shades forms the body of Ray-O-Lite awnings for commercial use. They are rigidly supported by strong frame of polished and anodized, weather resistant aluminum components. Lightweight awnings retain their colors and do not darken areas they are designed to shade. They cut out glare, but let diffused light through. Made by **Ray-O-Lite Corp.**, Dept. L, 696 Greenwood Ave. N.E., Atlanta 6, Ga.

▲ For more details circle **NED-2353** on enclosed inquiry slip ▲

ELECTRONIC RECORDER
for use with testing machines

Incorporating high speed and accuracy inherent in electronically controlled null balance system, model 51 electronic recorder has chart drum which rotates in direct proportion to strain or deformation of specimen under test. Applicable with tension, compression and transverse testing machines, instrument has sensitivity of 0.05-per cent of full scale and accuracy of strain coordinate of 0.2-per cent of full scale. Standard instrumentation is available for motion detectors for magnifications ranging from 1000:1 to 1:1. Magnifications are instantly available by flipping a switch, even while tests continue. Offered by **Tinius Olsen Testing Machine Co.**, 1072 Easton Rd., Willow Grove, Pa.



▲ For more details circle **NED-2354** on enclosed inquiry slip ▲

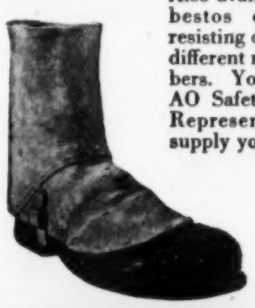
2 FAVORITES
in Leg and Foot Protection Against Heat, Sparks, Hot Metal Splashes

AO PROTECTIVE CLOTHING

AO 7X160 CL Legging. Protects lower leg, ankle and instep. Popular because of its unusual design and features. Spring clip on instep holds flare in position. Has three positions at top of legging and two positions at ankle for steel stay, permitting snug fit and immediate release.

AO 7X161 CL Spat. Safeguards instep and ankle. Spring clip on instep to hold flare. Three positions at top of spat and two at ankle for steel stay, assuring snug fit and immediate release.

Also available in asbestos or flame-resisting duck, under different model numbers. Your nearest AO Safety Products Representative can supply you.



American Optical
SAFETY PRODUCTS DIVISION
Southbridge, Massachusetts • Branches in Principal Cities

▲ For more details circle **NED-2355** on enclosed inquiry slip ▲

30 DAY DELIVERY

HOW TO SPEED PRODUCTION
HOW TO SAVE ⅓ INSTALLATION SPACE
HOW TO GET MORE BORE POWER
HOW TO SAVE MONEY

Use Dependable, Powerful
O-M CYLINDERS
AIR—WATER—HYDRAULIC
In full range of sizes (1½" to 8" bores). All machined steel with bearing bronze throughout. Interchangeable parts and mounting brackets.

FREE CATALOG Brand new! 28 pages of specifications, diagrams, and parts listing.

FREE TEMPLATES Complete set. Shows all cylinders and mounting brackets, ½ scale.

Write today to

ORTMAN MILLER MACHINE CO.
1222 150th St., Hammond, Indiana

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B.F.Goodrich

Hauling materials for loading

Hauling materials

Inter-plant hauls

TW ANALYSIS
points the way to savings for all materials handling

Here's the TW Analysis Plan:
- Specially-trained BFG representatives will analyze your operation.
- They'll study your equipment, floors and hauling surfaces.
- They'll make impartial recommendations regarding tire and wheel types and sizes.
- They'll *help* you—or your materials handling engineers get better service from your industrial tires and hauling equipment.

Use the coupon for complete information.

A similar plan is available for manufacturers of industrial hauling equipment.

The B. F. Goodrich Co.
Department TW-162
Akron, Ohio
Please give me additional information on your new Tire and Wheel Analysis plan.
Name_____
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City_____ State_____

RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

only B. F. Goodrich has a complete line of industrial tires.

▲ For more details circle **NED-2357** on enclosed inquiry slip ▲

BRADY QUIK-LABEL PIPE MARKERS

FAST... POSITIVE IDENTIFICATION

For a few cents per pipe, you can equip your entire plant with Brady QUIK-LABEL Pipe Markers. You can get a uniform system of pipe identification based on A.S.A. Standard A13. Names of materials printed in large black letters on correct A.S.A. background colors — no hand stenciling, painting, or hard to remember codes. Anyone who can read can tell at a glance the pipe contents and direction of flow. Over 235 different markers and direction arrows in stock. Specials made to order.

Brady QUIK-LABELS stick without moistening—applied in a jiffy, Silicone Plastic treated to resist dirt, grime, moisture—for indoor or outdoor service.

Brady Pipe Markers leave no room for doubt . . . or TRAGEDY.

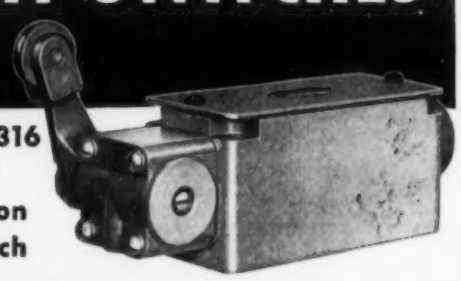
WRITE FOR Free SAMPLES AND USEFUL CATALOG

DISTRIBUTORS IN OVER 125 PRINCIPAL CITIES

MANUFACTURERS OF SELF-STICKING PRODUCTS
W.H. BRADY COMPANY
1623 E. SPRING STREET • CHIPPEWA FALLS, WIS.

For more details circle **NED-2358** on enclosed inquiry slip

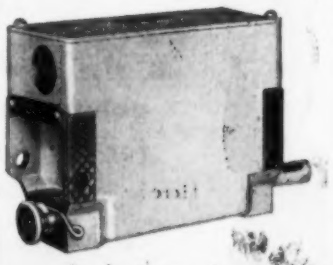
2 GOOD LIMIT SWITCHES



Bulletin 10316 Type F Snap Action Limit Switch

For limiting linear travel

The Cutler-Hammer 10316 Type F is a snap action limit switch for use in limiting linear travel of a moving member on many different machines, machine tools, cranes and hoists. It can be used to reverse motors and to initiate automatic cycles. Operating head mounts in any of 4 quadrants so it is easy to position switch. Roller lever, push roller or push rod operating head optional. Roller lever can be set in 90 different positions, 4 degrees apart. Roller lever available for trip in both directions, or trip in one direction and by-pass in the other direction. Two circuits, one normally open, one normally closed. Adjustable contacts for different arrangements of overlap, or no overlap. Twin-break, silver-to-silver, quick make and break contacts. Durable construction with oversized bearings and hardened surfaces. Standard, dustproof, dusttight, watertight or oiltight enclosures. Maximum accessibility for ease of wiring and adjustment.



Bulletin 10316 Type J Rotating Shaft Limit Switch

For limiting shaft rotation (*in two directions*)

Simple device, simply adjusted for limiting travel on number of shaft rotations in two directions on reciprocating equipment, machine tools, motor driven doors, baling presses, hoists, etc. To adjust settings, simply turn a knob on outside of case. You can vary length of stroke between 1/2 turn and 100 turns in fractions of 1/20th turn. Resets on 1/8th turn in reverse direction. Mounts on right or left side or bottom.

The Bulletin 10316 Type J Switch is available in 2 circuits, and 4 circuits for added control circuits. Standard 2 circuit switch has 2 normally closed contacts changed easily to normally open contacts. 4 circuit switch has normally open or normally closed contacts easily reversed, or changed to 2 normally open and 2 normally closed contacts. 2 circuit switch available in standard enclosure and both switches are available in NEMA 4 watertight or NEMA 5 dusttight construction. CUTLER-HAMMER, Inc. 1377 St. Paul Ave., Milwaukee 1, Wis. *Associate:* Canadian Cutler-Hammer, Ltd., Toronto, Ont.

CUTLER-HAMMER MOTOR CONTROL C-H

For more details circle **NED-2359** on enclosed inquiry slip

OSCILLOSCOPE
5-in. model has wide frequency range

Illuminated calibration meter incorporated in model 3441 oscillograph makes possible viewing of percentage of positive and negative peak-to-peak volts in addition to reading peak-to-peak voltage direct in eight ranges from 0 to 1000 v. Possessing wide frequency range, 5-in. unit has horizontal amplifier-frequency range flat within plus or minus 20 per cent from 20 cycles to 150 kc. Deflection sensitivity is 0.15-volt-inch RMS. Instrument combines synchronizing and horizontal sweep selector in same control for operation simplicity. High gain amplifier system available is suited for tracing audio circuits and checking noisy components. Phone jack on panel makes possible comparing visual pattern with familiar audio sounds. Accessories include coaxial cables, probe and instructions. Crystal signal tracing probe is extra equipment. Made by **Triplett Electrical Instrument Co.,** 10 Harmon Rd., Bluffton, O.

For more details circle **NED-2360** on enclosed inquiry slip

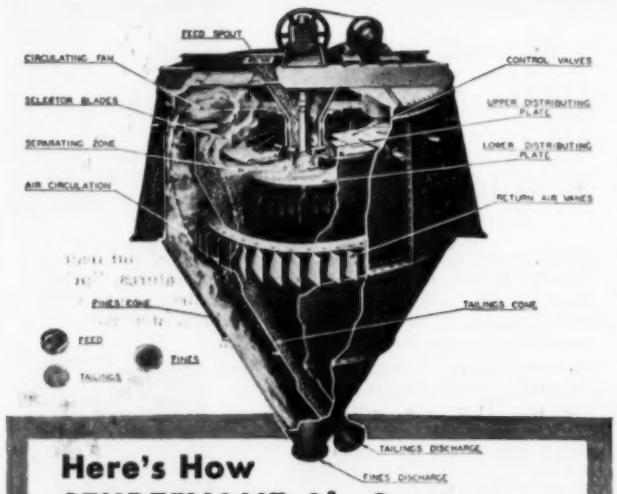
PORTABLE ELECTRIC DRYER
delivers regulated volume of air at any desired temperature

Adaptable for industrial, laboratory, production and other drying applications, Electric-Aire portable drying unit plugs into any 110-125-v ac or dc power source. Volume, velocity and temperature of air stream are adjustable to suit application. Direction of air flow is also adjustable by means of 2-ft length of 3⅝-in. flexible hose which can be set for any angle of discharge. Hose rotates 360 degrees and drying unit can be rotated in full circle around its axis. Special nozzles can be provided.

Stand is mounted on four ball bearing casters, and heavy base assures low center of gravity to prevent tipping. Counterbalanced shaft on stand permits drying unit to be raised or lowered easily throughout range of 30 to 50 in. above floor. Safety lock prevents slipping. Drying unit is removable from stand for stationary wall or table mounting.

Temperature and air flow controls are easily set to desired amounts. Controls lock so that they cannot be changed by unauthorized personnel. Operating mechanism floats in rubber to minimize noise and to provide complete insulation from shock. Made by **Electric-Aire Engineering Corp.,** Dept. NED, 209 W. Jackson Blvd., Chicago 6, Ill.

For more details circle **NED-2361** on enclosed inquiry slip



Here's How STURTEVANT Air Separators Increase Production of Fines ...Lower Production Costs

Sturtevant Air Separators effect production savings by increasing output by 25 to 300% . . . reducing power consumption by as much as 50%.

They efficiently carry off all classified materials in any desired fineness from 40 to 325 mesh and finer . . . eliminate the need of screening in certain applications. Capacities available from ¼ to 50 tons per hr. *Write for full details, today.*

Sturtevant Mill Company
114 Clayton Street, Boston 22, Mass.

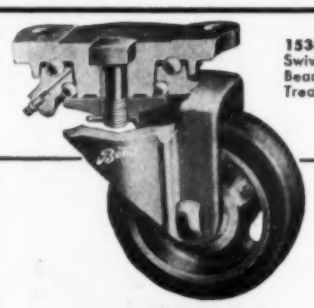
For more details circle **NED-2362** on enclosed inquiry slip

. . . their heads and threads are strong

Continuous grain flow, following the contour of head and threads, eliminates the straight planes of weakness along which shear can occur. SPS recommends *Standards*—#4 to 1"—available from your UNBRAKO distributor's stocks. Write for UNBRAKO *Standards* today. STANDARD PRESSED STEEL CO., Jenkintown 24, Pennsylvania.

UNBRAKO SOCKET SCREW DIVISION **SPS** JENKINTOWN PENNSYLVANIA

For more details circle **NED-2363** on enclosed inquiry slip



1536A Series—Double Ball Race Swivel Caster equipped with Roller Bearing Vulcanized-on Soft Rubber Tread Wheels.

Bond® built-for-the-job CASTERS

insure

- Increased plant efficiency
- Faster materials handling
- Lower production costs

1A Series—Stationary Caster equipped with Plain Bearing Semi-Steel Wheel.

SELECT any of the more than 25 different types of Bond industrial casters for your materials handling jobs and *know* that these efficient, sturdy and economical casters will roll-up greater production profits every time.

For the complete facts on all Bond Truck Casters write for your copy of Catalog K-38.

BOND FOUNDRY & MACHINE CO.
Manheim, Penna.

For more details circle **NED-2364** on enclosed inquiry slip

HYDRAULIC DESIGN MADE EASY!

This Hannifin catalog gives complete engineering and design data on 11 Hydraulic cylinder mounting types, 1" to 8" bore, with or without cushions—styled to meet every requirement. Interchangeability of collars and caps makes possible unlimited combinations. Send for your copy of this valuable reference.

WRITE FOR BULLETIN 110.

HANNIFIN

Hannifin Corporation • 1127 S. Kilbourn Ave. • Chicago 24, Illinois

For more details circle **NED-2365** on enclosed inquiry slip

BAKER THAT THESE THE ONLY TRUCK GIVES YOU IMPORTANT ADVANTAGES

Yours for the Asking!

18-page picture-story manual "CARE and MAINTENANCE of INDUSTRIAL TRUCKS." Write for your copy today.

BAKER INDUSTRIAL TRUCK DIVISION of The Baker-Raulang Company
1245 West 80th Street, Cleveland 2, Ohio

Baker INDUSTRIAL TRUCKS

▲ For more details circle NED-2366 on enclosed inquiry slip ▲

Wolverine STANDARD ACTION TOGGLE CLAMP

A REAL ECONOMY CLAMP—SUITABLE IN OVER 75% OF APPLICATIONS

★ ★ ★

SIMPLE STRONG DURABLE

Don't overlook the cost-saving possibilities of using the basic, dependable Wolverine Standard Action Toggle Clamps wherever practicable. You will find them suitable in many of your applications where the special advantages of the Wolverine Quick Action Units are not essential. There is a Wolverine Toggle Clamp to suit your needs. You will find them superior in quality and lower in cost. *Write for Bulletin C-106.*

IMMEDIATE DELIVERY

WOLVERINE TOOL CO.
1482 E. WOODBRIDGE
DETROIT 7, MICHIGAN

SINCE 1926 OUR 25TH YEAR

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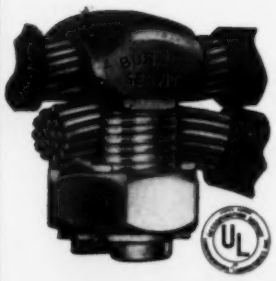
SERVIT



Number one choice among split bolt connectors, the efficient Burndy Servit is available for splicing, tapping, or dead ending any combination of copper, steel, or aluminum conductors.

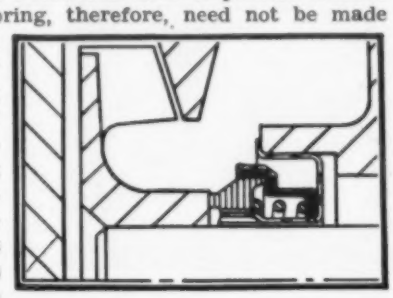
Ask your Burndy Distributor

BURNDY
NORWALK · CONNECTICUT

▲ For more details circle NED-2368 on enclosed inquiry slip ▲

PRESSED-IN TYPE SEAL
for shaft speeds of 6000 rpm or over

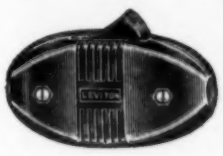
Synthetic rubber flexing member encloses the spring of John Crane type 11A Pressed-in Seal to protect it from corrosive liquids. Spring, therefore, need not be made of corrosion resistant materials. Retainer does not contact shaft so that shaft sizes of ⅜, ½, ⅝ in. and intermediate shaft diameters can be handled with one size seal. Since seal is stationary and does not revolve with shaft, and because rubber sealing member is very flexible, unit is practical for high shaft speeds of 6000 rpm or over and for installations where shaft vibration is encountered. It will withstand pressures up to 50 psi and temperatures to 212° F. Made by **Crane Packing Co.**, Dept. F-25, 1800 Cuyler Ave., Chicago 13, Ill.



▲ For more details circle NED-2369 on enclosed inquiry slip ▲

FEED-THROUGH SWITCH
has double wiping contacts

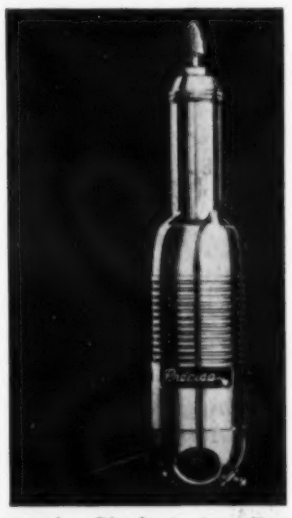
Available in brown Bakelite and in ivory, No. 5410 and 5410-I heavy duty single pole, feed-through switches are rated at 10 amp, 125 v or 5 amp, 250 v. Fast action unit has phosphor bronze double wiping contacts. Groove for through-lead and terminals are on same half for easy wiring. Toggle is of rocker type for thumb control. Off and on are clearly marked on toggle. Cord hold hole is ¼-in. diameter. Made by **Leviton Mfg. Co.**, 236 Greenpoint Ave., Brooklyn 22, N. Y.



▲ For more details circle NED-2370 on enclosed inquiry slip ▲

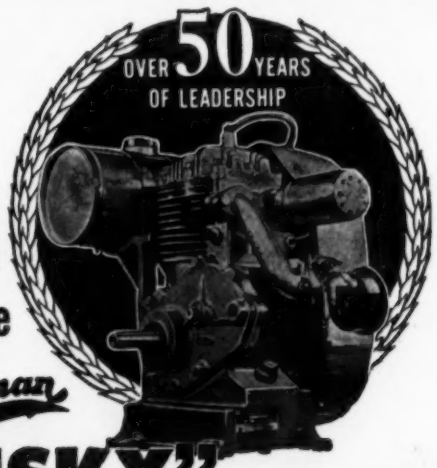
GRINDER-MILLER
can be mounted or used as hand tool

Grinding, milling and finishing of small parts in production and all types of work in toolroom can be performed by Super 40 grinder-miller, equipped with ¼-hp motor. Speeds are controllable from 15,000 to 45,000 rpm. Applications include internal, external, cylindrical and form grinding; milling with high speed steel or carbide midget mills; sawing; slotting; small diameter drilling and other operations. Soft and hard materials can be worked to tolerances within 0.0001-in. Coolflex flexible shaft is available for attachment to tool. Electric motor is easily accessible for cleaning or replacement. Steel air impeller develops air speeds up to 9000 fpm for cooling. Made by **Precise Products Co.**, 1346 Clark St., Racine 11, Wis.



▲ For more details circle NED-2371 on enclosed inquiry slip ▲

OVER 50 YEARS OF LEADERSHIP



Industry depends on the Cushman "HUSKY"

The advance designed Cushman "Husky," a compact, lightweight engine has proved its worth over half-a-century of efficient and dependable service. Four-cycle, single cylinder, L-head Cushman "Husky" engines, with three models developing from 1.5 to 6.0 h.p., are adaptable to hundreds of operations. The "Husky" is particularly suitable for original equipment installations requiring high-output, long life engines.

Sturdy "Husky" engines are designed to deliver their full rated horsepower hour after hour under load with maximum economy and minimum service and attention.

Serviced Internationally by Cushman Motor Scooter Dealers
Investigate today by writing for free details and information.

CUSHMAN MOTOR WORKS, INC.
965 NO. 21ST ST. — LINCOLN, NEBRASKA

▲ For more details circle NED-2372 on enclosed inquiry slip ▲

SPARE PARTS BOXES
to meet Government specifications
FOR ARMY AND NAVY ORDERS

Many Army and Navy contracts require that spare parts be furnished in specially designed boxes. Stackbin has specialized in the fabrication of spare parts boxes to meet exacting Government specifications. The assemblage is complete, including all-welded sheet metal construction with proper fittings and hardware. In any quantity, in minimum time.

Write Stackbin Corp., 1081 Main St., Pawtucket, R. I.

STACKBIN SYSTEM
"Stacked and Still Accessible"

▲ For more details circle NED-2373 on enclosed inquiry slip ▲

THERE'S NOTHING LIKE A

Clarke

You name the problem . . . Clarke has the answer. For every phase of floor maintenance there's a Clarke machine to deliver year after year of rugged, dependable service. For well-kept floors at lower cost there's nothing like a Clarke!

Write for Full Information

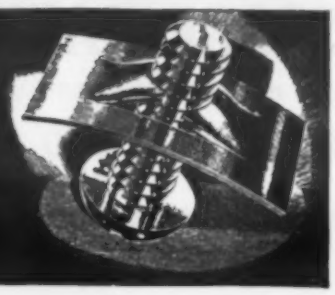
CLARKE SANDING MACHINE COMPANY
223 Clay Street Muskegon, Michigan

Sales Representatives and Service Branches in Principal Cities

Porter-Cable floor sanders and edgers are now manufactured and distributed by Clarke Sanding Machine Company. Sales and service of these machines is available through Clarke authorized sales representatives and service branches.

▲ For more details circle NED-2374 on enclosed inquiry slip ▲

STANDARD FLAT TYPE C7000 SERIES SPEED NUTS



IMMEDIATE DELIVERY!

Fastest Thing in Fastenings

Faced with a shortage of lock nuts? Do as thousands of manufacturers have done—switch to SPEED NUTS. They can be applied much faster, eliminate assembly steps, and provide maximum holding power at minimum cost per fastener. They spin on by hand, tighten down without being held with a wrench.

10 SIZES—For machine screws, C7000 SPEED NUTS are available in these sizes: –436, –632, –832, –1024, –¼-20. For tapping screws: –4A, –6A, –8A, –10A, –14A. Write for samples.

TINNERMAN PRODUCTS, INC.
Dept. 12-A, Box 6688, Cleveland 1, Ohio

▲ For more details circle NED-2375 on enclosed inquiry slip ▲

4-WAY SOLENOID OPERATED AIR-VALVE only $32.50

For Fast Operation of Cylinders up to 3" Diameter

Compact sturdy construction, precision engineered for long, uninterrupted heavy duty operation.

Has small, well protected solenoid—operates small cylinders up to 3" dia. and larger cylinders where unusual speeds are not required.

Quantity and O.E.M. discounts. Write for description, discounts, etc.

IMMEDIATE DELIVERY

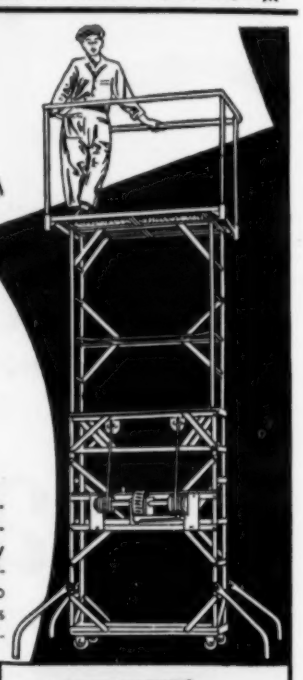
3-WAY VALVE
Same Design
only $19.80

AUTOMATIC VALVE CO.
37425 GRAND RIVER AVE., FARMINGTON, MICH.

▲ For more details circle NED-2376 on enclosed inquiry slip ▲

No Erection Required . . . Use at Any Height

HI-LIFT PORTABLE WORK PLATFORM



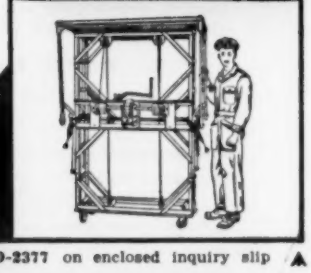
for Overhead Maintenance, Painting, Lighting, Cleaning, etc.

- Safe, Sturdy, Dependable
- No Loose Parts
- Easily Rolled . . . Easily Raised

When safety counts, count on Hi-Lift. Sturdy, all welded steel construction means absolute safety . . . outrigger brace prevents tilting or rolling. Small enough to pass through doorway, yet raises to 11 ft. 6 in. Endorsed by leading concerns.

Also Makers of HI-LIFT Extension Scaffold and ATLAS One-Man Truck Loader.

Write for Complete Information



ATLAS INDUSTRIAL CORP.
853 39th Street
Brooklyn 32, N. Y.

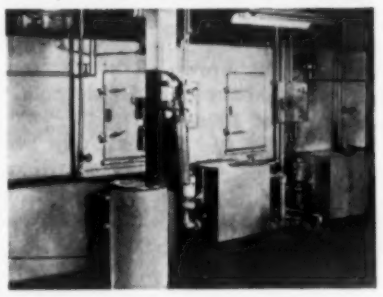
▲ For more details circle NED-2377 on enclosed inquiry slip ▲

EMERGENCY FUEL UNIT replaces engine fuel system

Vehicles or engines stalled because of any fuel system breakdown such as frozen or leaky lines, faulty fuel pump, vapor lock or lack of gas can be started and operated for short period with this Gas-O-Lator emergency fuel unit. It operates independently of regular fuel system and mounts directly on carburetor after removal of air cleaner. Device holds 1 gallon of fuel, is leak and fireproof and also controls flow of top lubricants during motor tune-up or break-in. Made by **Viking Tool & Machine Corp.**, Dept. A, 2 Main St., Belleville 9, N. J.

▲ For more details circle NED-2378 on enclosed inquiry slip ▲

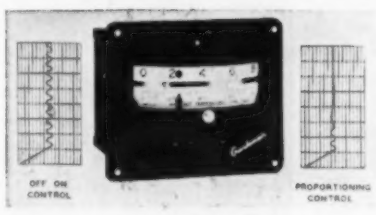
CLEANING-TREATING MACHINE prepares metal parts for finishing



Up to 36 sq ft of surface on carbon steel wire frames and metal stampings are processed per minute in this overhead monorail washer. Operations performed automatically by machine are phosphatizing, clear water rinse, chromic acid bath and drying. These impart excellent surface for subsequent spray painting, prevent peeling and reduce paint-fault rejects. Plant steam is used for heating solutions. Made by **Industrial Washing Machine Corp.**, Dept. E, 292 Burnet St., New Brunswick, N. J.

▲ For more details circle NED-2379 on enclosed inquiry slip ▲

PYROMETRIC CONTROLLER is proportioning indicating type



Situations calling for maintenance of exact temperatures, such as in plastic injection molding machines, extruding and industrial heat treating, are potential applications for model JP Gardsman proportioning indicating pyrometic controller. It automatically adjusts ratio of power "on" and "off" over given time cycle to maintain any desired temperature set with index pointer. This "straightens out" temperature control curve and gives close and accurate control. Proportioning controller "anticipates" temperature changes of its load, thus eliminating the lag or thermal inertia of both heating and cooling cycle. Meter pointer indicates exact temperature at all times. Unit is available in 36 standard scale and thermocouple ranges for use on either 115 or 230 v, 60 cycle lines. Made by **Taco West Corp.**, 527 N. Noble St., Chicago 22, Ill.

▲ For more details circle NED-2380 on enclosed inquiry slip ▲

Nationwide Swing to

FISHER SERIES 67 SMALL VOLUME REGULATORS

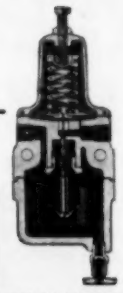
AN ALL-PURPOSE REGULATOR PARTICULARLY ADAPTED AS AN AUXILIARY OPERATING MEDIUM PRESSURE REGULATOR

- ACCURATE, EFFICIENT REGULATION
- TIGHT CLOSURE • WILL NOT CHATTER, VIBRATE OR SING • NEAT DESIGN

CAPACITY UP TO 6 C.F.M.
WRITE FOR FISHER BULLETIN 67

FISHER GOVERNOR COMPANY
Marshalltown, Iowa

TYPE 67
With handwheel adjusting screw.



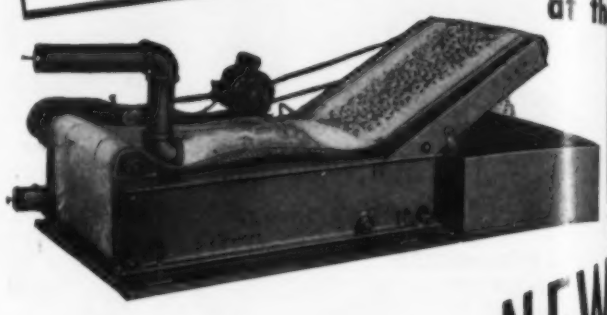
TYPE 67 FR
Combination filter regulator.

FISHER
LEADS THE INDUSTRY IN RESEARCH FOR BETTER PRESSURE CONTROL

▲ For more details circle NED-2381 on enclosed inquiry slip ▲

Honan-Crane Puts the Emphasis on.. "See to

at the AST



NEW

See Them Work at the Tool Show

- HOUDAILLE AUTOMATIC CLARIFIER for large central coolant systems
- HOUDAILLE MAGNETIC FILTER for individual machine tools
- HOUDAILLE MOBILE COOLANT FILTER lets one man service many machines
- HOUDAILLE SUMP CLEANER saves maintenance man-hours on cleaning
- HOUDAILLE CONVEYOR for continuous chip and waste removal
- HONAN-CRANE "C" TYPE PURIFIER combination filter and purifier
- HOUDAILLE "T" TYPE CLARIFIER for individual machine tools

*Chicago, March 17-21

▲ For more details circle NED-2382 on enclosed inquiry slip ▲

▲ For more details circle NED-2383 on enclosed inquiry slip ▲

TAKE

*Patent No. 2,445,038. Other patents pending

▲ For more details circle NED-2384 on enclosed inquiry slip ▲

"for yourself"

ASTE tool show*...booth 1716

Honan-Crane demonstrates Coolant Filtration equipment designed to reduce operating costs . . . prolong tool life . . . reduce "rejects" . . . permit better product finishes in every machine tool operation . . . for every plant layout!

Houdaille Web-Type Self-Cleaning COOLANT FILTER
. . . for individual machine tools or small central coolant systems

Compact, automatic filtering unit utilizes continuously rotating filter belt that cleans itself, gives long, efficient service. Handles large volume of coolant in minimum floor space. 40 GPM model only 69½" x 39½" x 28½". Degree of filtration may be varied. Ideal for all types of grinders, broaches, drilling, lapping, milling machines, etc. Available in capacities from 40 to 400 GPM.

If you can't get to the Tool Show, be sure to write for equipment bulletins giving complete information and specifications.

WORLD LEADING OIL FILTER MANUFACTURER

Honan-Crane Corp.
405 Wabash Avenue, Lebanon, Indiana
A Subsidiary of
Houdaille-Hershey Corp.

circle NED-2382 on enclosed inquiry slip ▲

Here's your guide to the best in roller and wheel conveyers

● 68 pages of design details and illustrations covering MATHEWS Roller and Wheel Conveyers. A complete line of high-quality rollers ranging in diameter from 1" to 6½", and in capacities from 50 to 16,000 pounds, is shown in convenient sequence. Wheel Conveyers are described and illustrated. Whether you handle loads weighing a few ounces or 50,000 pounds, you will see that MATHEWS builds conveyers light enough or heavy enough to do the job efficiently. Write for Catalog 151 today. And remember, you get the best when you buy MATHEWS Conveyers.

MATHEWS CONVEYERS

GENERAL OFFICES
Mathews Conveyer Company . . Ellwood City, Pennsylvania
PACIFIC COAST DIVISION
Mathews Conveyer Company West Coast . San Carlos, Calif.
CANADIAN DIVISION
Mathews Conveyer Company, Ltd. Port Hope, Ontario
Engineering Offices or Sales Agencies in Principal American and Canadian Cities

circle NED-2383 on enclosed inquiry slip ▲

AKE OFF THE BRAKES
for faster production!

HERE'S a new development in materials handling technique *right now increasing production up to 50%* in job after job! It's the new *Work-O-Matic drop-bottom production box and positioning stand.

The drop-bottom Work-O-Matic *automatically* feeds parts at proper work level. Moreover, the stand's reservoir tray provides for uninterrupted work flow while the empty box is being replaced.

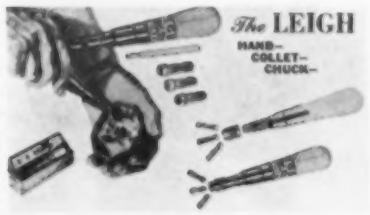
The Work-O-Matic box does everything any ordinary box does . . . and more! Tiering, moving and storing of unit loads, *plus* time-saving *mechanical* discharge!

Get the whole story. Write to The Union Metal Manufacturing Co., Canton 5, Ohio, for illustrated Folder MH-809 and typical T & M Studies.

UNION METAL
Materials Handling Equipment

circle NED-2384 on enclosed inquiry slip ▲

UNIVERSAL HANDLE CHUCK
holds 3/32 to ¼-in. shank tools



Usable in patternmaking, tool and die work, assembly, finishing, testing and other operations, this Leigh hand collet chuck will hold such shank tools as screwdrivers, scrapers, wrenches, rotary files, mounted points, abrasive disks, polishing buffs and rotary cutters. Smooth wooden handle is shaped to fit hand and is equipped with fixed ¼-in. collet chuck. Reducing collets are furnished for holding tools with 3/16, ⅛ or 3/32-in. round shanks. Tool facilitates hand finishing, deburring, countersinking, chamfering, scraping, reaming, tapping and similar operations. Made by **Spring Specialty Co.**, 25 N. Fifth Ave., Maywood, Ill.

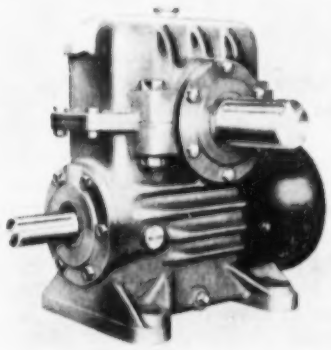
▲ For more details circle **NED-2385** on enclosed inquiry slip ▲

PLASTIC-COATED GLOVES
resist water, acid, alkali and oil

Made by centrifugal process which coats them with tough, abrasion resistant vinyl plastisol. Hyflex gloves offer protection against water, acids, alkaline materials, oils and other corrosive chemicals. Process makes possible good adhesion of plastic to canvas and eliminates pinholes. Gloves are flexible over temperature range from freezing to 200° F. They are flexible enough for laboratory work and withstand severe production service. Made by **Houghton Laboratories, Inc.**, Dept. 3A, 333 Bush St., Olean, N. Y.

▲ For more details circle **NED-2386** on enclosed inquiry slip ▲

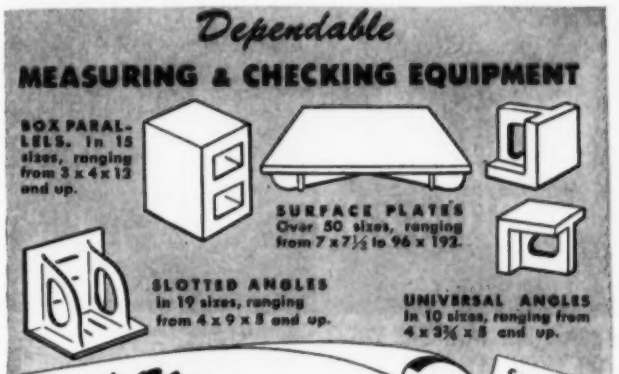
SPEED REDUCERS
various ratios, horsepowers offered



Ratios ranging from 5 to 1 through 100 to 1 and horsepower ratings from fractional up to 400 are included in Crofts Radiation line of speed reducers. Smaller units of 1⅛, 1¾ and 2¼ in. diameters feature universal mounting of worm for bottom, top or vertical installation. Legs can be mated to holes in housing suited to specific mounting. Ten sizes from 3½ through 14 in. are fan cooled. Available from **National Transmission Distributors, Inc.**, Dept. 11, 684 Broadway, New York, N. Y.

▲ For more details circle **NED-2387** on enclosed inquiry slip ▲

Dependable
MEASURING & CHECKING EQUIPMENT



and Now
HAND WHEELS, KNOBS, HANDLES
Cadmium Plated READY TO DELIVER
Non-rusting — good looking

Send for Complete Catalog

We also build jigs, fixtures, special tools and machinery. Send us your blueprints.

MACHINE PRODUCTS CORPORATION
6763 E. McNichols Road • Detroit 12, Mich.

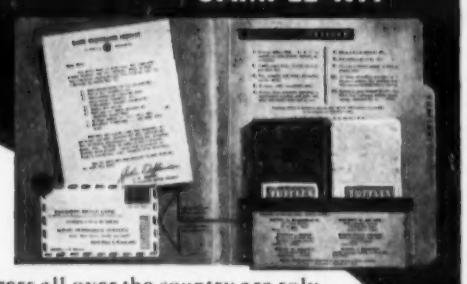
▲ For more details circle **NED-2388** on enclosed inquiry slip ▲

SPRACO NOZZLES

Write for NOZZLE CATALOG *to*
SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

▲ For more details circle **NED-2389** on enclosed inquiry slip ▲

THERE'S NEWS FOR YOU IN THIS TUFFLEX SAMPLE KIT



Manufacturers all over the country are solving design problems, simplifying production, achieving new economies, increasing salability —with TUFFLEX, the remarkable fiber felt. There's practically no end to TUFFLEX versatility. It cushions. It protects. It absorbs sound—dampens vibration. It insulates. It die cuts with firm, true edges. New applications are turning up constantly. Perhaps TUFFLEX can solve a problem for *you*. Send now for free sample kit, containing TUFFLEX samples and giving specifications! Wood Conversion Company, Dept. 127-32, First National Bank Bldg., St. Paul 1, Minnesota.

WOOD CONVERSION COMPANY

▲ For more details circle **NED-2390** on enclosed inquiry slip ▲

Counts Batch Quantities **Automatically**

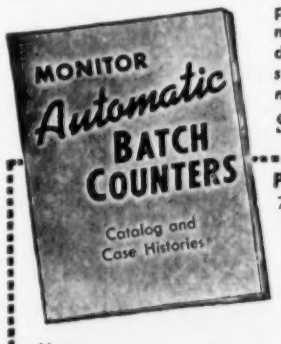
A BIG Labor Saver
Eliminates Hand Counting
Stops over-count losses and under-count complaints
Speeds production

Used for years in Steel and Paper Mills; Factories and Breweries; Can, Carton, Bottle Cap and Printing Plants, etc.

Monitor Automatic Batch Counter

Counts any desired batch quantity of parts, sheets, lengths, etc., and automatically controls packaging, separating, diverting and marking devices—*without slowing down production and without missing a single count.*

Send for case histories.



PRODUCTION INSTRUMENT CO.
700-12 W. Jackson Blvd., Chicago 6, Ill.

Send case histories showing economies effected by Monitor Batch Counters .

Company_____
Name_____ Title_____
Street_____ City_____ Zone____ State_____
MB-4

▲ For more details circle **NED-2391** on enclosed inquiry slip ▲

DETECTO SCALES

There's a precision-accurate Detecto Scale for your specific weighing and counting need. The Detecto helps increase production, yet assures you maximum accuracy by making slightest weight discrepancies immediately visible.

DETECTO ALUMINUM SPEED SCALE

For increased production at lower cost! One operator with one Speed Scale does as much as two operators with ordinary scales. Sturdy, precision built, super-accurate. Ends overweight losses.

Write for Literature

DETECTO SCALES • INC.
MAKERS OF FINE SCALES SINCE 1900
541 N PARK AVE. • BROOKLYN 5, N.Y.
SCALE ENGINEERS IN ALL PRINCIPAL CITIES

For more details circle NED-2392 on enclosed inquiry slip

NEWARK Metallic FILTER CLOTHS

Here are five different weaves of Newark Metallic Filter Cloths. All different in the arrangement of the strands; hence different also in their functioning.

Study the shape of the solids in your solution being filtered. That's just as important as the size, if you want clarity of filtrate. Then write us fully about the solids and we'll be glad to recommend the weave of the cloth that will "stop" them.

Many malleable metals are still available so, if necessary, we can probably supply you with a material that will also withstand highly corrosive conditions. When writing, also give solution characteristics.

All Newark Filter Cloths are woven in our own plant, on our own looms, by our own skilled weavers.

NEWARK for ACCURACY

Our entire line of Filter Cloths, Wire Mesh and Space Cloth, Sieves, "End-Shāk" Testing Units and other Newark Products are described fully in our new Catalog D. Send for a copy.

Newark Wire Cloth COMPANY
351 VERONA AVENUE • NEWARK 4, NEW JERSEY

Philadelphia 3, Penna. 1311 Widener Bldg. San Francisco, Calif. 3100 19th St. Chicago, Ill. 30 N. Wacker Dr. New Orleans, La. 520 Maritime Bldg. Los Angeles, Calif. 1400 So. Alameda St. Houston, Texas P. O. Box 1979

For more details circle NED-2393 on enclosed inquiry slip

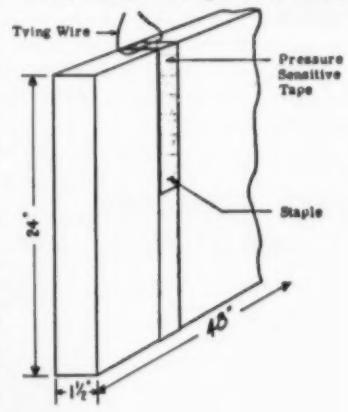
SCREW THREAD COMPARATOR records variations of pitch diameter

Exact size of screw threads, actual discrepancy of rejects and how much to allow for plating is information that can be obtained with this screw thread comparator. Instrument records variations of effective or pitch diameter on easy-to-read indicator scale equipped with tolerance pointers. Measuring elements are pairs of helical springs of the correct size to suit thread being measured. Each pair of springs is supplied in container marked with pitch of screw for which they are intended. Printed on container are constant dimensions for American (A.N.), Whitworth (B.S.W.) and Cycle (B.S.C.) threads, enabling user to measure any size screw, standard or nonstandard, within capacity of instrument. Accuracy is well within B.S.I. gage tolerances. Made by **O-Vee Spring Gauge Co.**, Dept. NED, 2516 W. Vernon Ave., Los Angeles 8, Calif.

For more details circle NED-2394 on enclosed inquiry slip

FACTORY NOISE ELIMINATORS acoustical baffles are hung from ceiling in high noise level areas

Usable in areas where cost of installing conventional types of acoustical ceilings is prohibitive because of ceiling obstructions such as cranes, steam and process lines, lighting fixtures and sprinkler systems, Noise-Stop acoustical baffles are particularly adaptable to factories, machine shops, cafeterias and similar areas. Easily and economically installed, baffle consists of rigid panel of Fiberglas PF insulation, measuring 24 x 48 x 1½ in. completely enclosed in a printed plastic film.

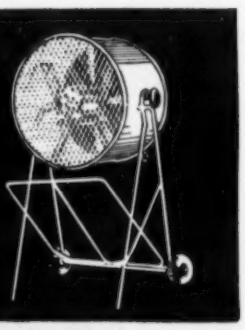


Baffles are hung from wires strung horizontally at desired height. Wires normally run lengthwise of room at predetermined spacings, and turnbuckles eliminate sagging. Pressure-sensitive tape secures short length of tying wire to edge of baffle, and tape is lapped over wire for added strength. Tying wire is looped and twisted around suspension wires, and baffles can be hung above or below ceiling lights in one or more tiers.

Noise level reduction of 30 to 60 per cent is obtained in extremely noisy areas, depending upon number, placement and spacing of baffles. By reducing worker fatigue caused by noise, this system has been found to improve hourly output. Acoustical baffles are made by **Owens-Corning Fiberglas Corp.**, Nicholas Bldg., Toledo 1, O.

For more details circle NED-2395 on enclosed inquiry slip

GIVE 'EM AIR! WATCH PRODUCTION CLIMB



KEEP YOUR WORKERS COOL FOR MORE EFFICIENT WORK.

Portable Man Cooler
Light Weight
High Tensile Strength
Cast Aluminum Propeller Blades

Industrial Air's Portable Man Cooler fills every job requirement. Sizes up to 72" in diameter and from 1000 to 100,000 C. F. M. Its rugged construction, light weight and high output make it the perfect fan for factory, foundry, mill, etc. Propeller is well guarded, and the pitch adjustable.

Duct Fans
Direct or Belt Driven
Utility Man Cooler
Roof Ventilators
Duct Type Fan
Duo Duct

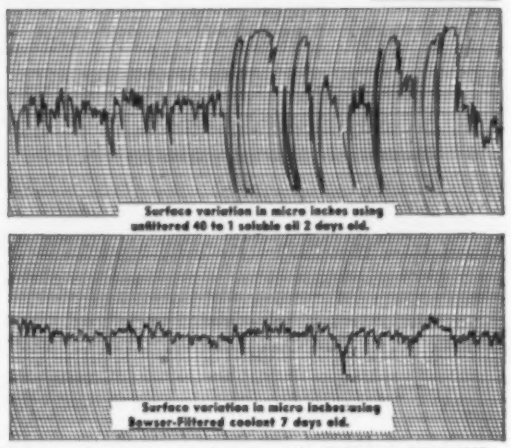
Represented in All Principal Cities
Write Dept. 301 for complete catalog

THE HARVEY P. BERTRAM CO.
1008 W. Ninth St. *Cincinnati, Ohio*

For more details circle NED-2396 on enclosed inquiry slip

NOW —MORE THAN EVER

COOLANT MUST BE KEPT CLEAN!



These surface variations are from work FINISH GROUND to .0001 tolerance, to be lapped later to 1/200,000.

Rejections averaged 25% with unfiltered coolant—were reduced to less than ½% when Bowser-filtered.

Our nearest sales engineer will welcome an opportunity to discuss your coolant filtration problems. May we have him call?

BOWSER, INC., 1381 Creighton Ave., Fort Wayne 2, Ind.

BOWSER LIQUID CONTROL SPECIALISTS SINCE 1885

For more details circle NED-2397 on enclosed inquiry slip

A Tal Bender

with new *bend* indicator

Easy does it with a Tal

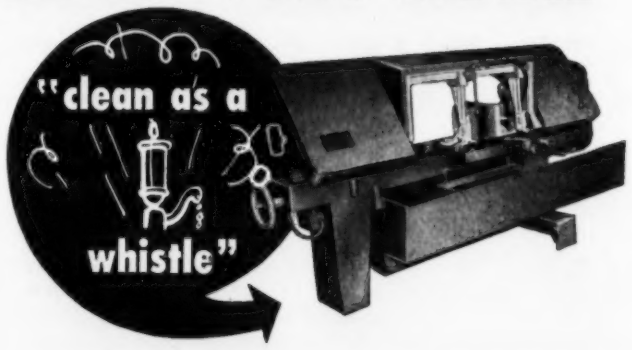
No training required

For original installation or for repair, a Tal on-the-job bender for pipe or tubing does in seconds work that otherwise takes many minutes. Because a Tal repays its cost so quickly, and does it time and again, thousands are in use everywhere. Write today for factual bulletin.

Tal Bender, Inc. Dept. NED-6 Milwaukee 2, Wis.

For more details circle NED-2398 on enclosed inquiry slip

NOW...CUT METAL



That's right. There's no burr and kerf is held to a bare minimum when cutting with a Kalamazoo Metal Cutting Band Saw! What's more, accuracy of a few thousandths can be maintained in cutting bars, rounds, angles and odd shapes.

Remember, for continuous or intermittent production cutting at *lowest cost . . . a Kalamazoo can't be beat!* Three sizes are available, all can be had with casters for complete portability. Before you specify any metal cutting band saw . . . investigate what Kalamazoo offers!

MACHINE TOOL DIVISION

Kalamazoo TANK and SILO CO.
312 HARRISON ST., KALAMAZOO, MICHIGAN
See us at Booth 1019—ASTE Convention

For more details circle NED-2399 on enclosed inquiry slip

"HAYNES STELLITE"
Trade-Mark

GUIDE ROLLS

Resist Abrasion . . . Thermal and Mechanical Shock

Because HAYNES STELLITE guide rolls have no temper to lose when handling hot steel, they have excellent strength and wear resistance in service. The guides also have good resistance to thermal and mechanical shock.

Loose particles of steel will not adhere to guides made of HAYNES STELLITE alloy. They are extremely resistant to oxidation at high temperatures, have a low frictional coefficient, and will take and keep a high polish.

For further information about HAYNES STELLITE alloy guides for handling bars, rods, and wire, write to our General Offices in Kokomo, Indiana.

Haynes Stellite Company
A Division of Union Carbide and Carbon Corporation
UCC
General Office and Works: Kokomo, Indiana
"Haynes Stellite" is a trade-mark of Union Carbide and Carbon Corporation.
For more details circle NED-2400 on enclosed inquiry slip

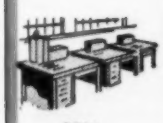
AETNA

is the Single, Logical Source for all your PLYWOOD needs

INDUSTRIES USING AETNA PLYWOOD

AVIATION

TRANSPORTATION


TOOL

CHEMICAL

ELECTRICAL

Aetna has a large stock of Borden Glues, Monsanto Sealers and Bleaches to meet your most exacting needs.

Aetna provides plywood for every industrial use—by the carload or by the panel—depending on your requirements. Aetna supplies plywood for fabrication, from small toy parts to important members of airplanes . . . for building, from concrete forms to exteriors.

Here are 5 reasons why Aetna is the single, most logical source for all your plywood needs:

1. **LARGE STOCK on hand, including sizes cut to your specifications.**
2. **OVER 40 SPECIES—Fir, Gum, Birch, Walnut, etc. in stock 1/16" to 3" thick, 36" x 48" to 48" x 192".**
3. **MILL SHIPMENTS to your exact requirements.**
4. **QUICK DELIVERIES from 4 strategically located warehouses—completely stocked.**
5. **ENGINEERING STAFF to give you solid technical help in the form of performance data, design calculations, industrial facts.**

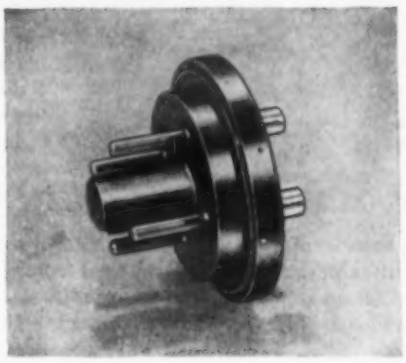
That's it . . . huge stock, wide range, quick service and technical help at no extra cost.

It will pay you to investigate Aetna Service.

AETNA PLYWOOD & VENEER CO.
1718 N. Elston Ave. Chicago 22, Ill.
ARmitage 6-7100
BRANCH WAREHOUSES: Grand Rapids 7, Mich.; Rockford, Ill. Indianapolis 2, Ind.

AETNA—PLYWOOD for every purpose
For more details circle NED-2401 on enclosed inquiry slip

NYLON PLUG BASE
fits standard medium octal socket



Developed for capacitors of type CE50 series, model 1800 nylon plug base is suitable for use in condensers made under JAN-C-62 specifications. Use of nylon affords adequate strength, hollow construction for weight reduction, excellent electrical properties and melting point in excess of 425° F. Slight resiliency of material eliminates danger of base cutting cathode tabs and results in good seal with can. Made by **Industrial Devices, Inc.**, 22 State Rd., Edgewater, N. J.

For more details circle NED-2402 on enclosed inquiry slip

SPECIAL CATHODE RAY TUBES
capabilities exceed standard types

Broad range of special cathode ray tubes is available for specialized applications whose requirements are beyond capabilities of standard RMTA-registered industrial type tubes. Typical special type is K1052 7-in. electrostatic tube containing five independent electron-gun and deflection-electrode structures in single glass envelopes. Auxiliary ring socket at neck assures connection to all deflection electrodes. Another type is K1101P 5-in. electrostatic tube for ultra high speed oscillography. Operated at accelerations up to 37,000 v, this tube presents usable displays of frequencies as high as 1000 megacycles. Made by **Allen B. Du Mont Laboratories, Inc.**, 1010 Main Ave., Clifton, N. J.

For more details circle NED-2403 on enclosed inquiry slip

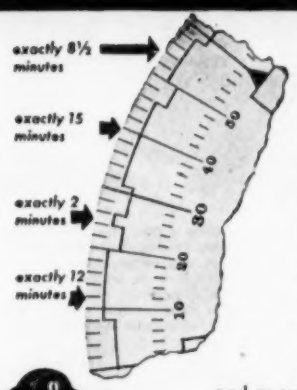
ELECTRIC TRACTOR
has 2000-lb maximum drawbar pull

Versatile materials handling in manufacturing, storage and shipping areas is provided by model A-545 electric tractor in medium-duty class. This two-wheel drive tractor is rated at 400 lb normal and 2000 lb maximum drawbar pull, and when powered by specified 48-v source, attains light running speed of 7½ mph. Four-wheel steering system is controlled by tiller-bar, and travel, on standard arrangement, is manually controlled by three-speed snap-action mechanical contractor unit. Foot acceleration is also available. Additional features include cushion-type tires, semi-elliptical spring suspension, front and rear double-reduction spiral bevel and spur gearing, and unit-constructed power plant. Made by **Mercury Mfg. Co.**, 4038 S. Halsted St., Chicago 9, Ill.

For more details circle NED-2404 on enclosed inquiry slip

NO MORE GUESSWORK!

PROCESS TIMING
automatically recorded by a Little "TIME CLOCK"



"The cure must be 8½ minutes"—"the heat must be applied exactly 15 minutes"—"the plating must take just 2 minutes"—"the pigment must be mixed just 12 minutes"—etc.

The *Servis Recorder* checks on this—it records just what happened—it "*times the process.*" You are no longer in the dark; from now on you know all day and every day whether your *process timing* is lived up to—or if somebody slipped—if something went wrong to ruin your product for that afternoon, or that whole shift! Write for Process Timing Catalog. The Service Recorder Co., 1375 Euclid Avenue, Cleveland 15, Ohio.

Bolt this 2 lb. Recorder right to the machine itself; Let the "Process" record itself on the chart —(No ink, no pencil, no wires; the record is recorded in wax).

The Servis Recorder
The "Time Clock" for Machinery

For more details circle NED-2405 on enclosed inquiry slip

ACCURATE...
to ± 1.5 pts. ROCKWELL!
to ± 5 pts. BRINELL!

NOW! *At-the-job, direct readings* of all metal types, sizes and shapes. Quick and simple . . . just press handgrips, read dial. Unskilled labor can test assembly line work. No conversion scales, no calculations! Ideal for parts, finished products no matter how large or small. Rockwell "A", "B", "C" scales. Low and medium Brinell scales. Both standard and superficial readings in one instrument!

WRITE NOW FOR BULLETIN ET 303

MANUFACTURED IN THE UNITED STATES

NEWAGE INTERNATIONAL, INC.
235 EAST 42nd STREET, NEW YORK 17, N. Y.
For more details circle NED-2406 on enclosed inquiry slip

KENNAMETAL *Carbide* TOOLING

GREATER PRODUCTIVITY!

Sturdy, long-wearing Kennametal tools enable men and machines to do more, in less time, at less cost. We have hundreds of performance reports to prove it—describing a wide variety of jobs on different types of materials. On many of these jobs Kennametal tooling pays for itself in savings effected in grinding, alone—not counting reduced tooling costs, and higher production rates attained. Let us demonstrate.

KENNAMETAL *Inc.*
Latrobe, Pa.

For more details circle NED-2407 on enclosed inquiry slip

FOR THE CRANE & HOIST USER...

"The WHY and HOW of Faster Production"

If you're searching for new ways to reduce materials handling costs . . . If you want to check your handling operations against installations in *other* plants . . . here's information you'll want! The 16-page booklet "The *WHY* and *HOW* of Faster Production" shows, through photos and sketches, how you can improve crane performance and reduce costs through a unique method of "tailored" crane construction. Mail coupon today.

Get this Information NOW!

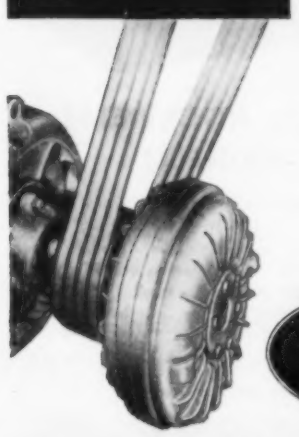
READING HOISTS & CRANES
Reading Crane & Hoist Corp.
2105 Adams St., Reading, Pa.

Please send us your free booklet "The *WHY* and *HOW* of Faster Production". I understand there is no obligation.

Name_____ Title_____
Company_____
Address_____
City_____ Zone_____ State_____

For more details circle NED-2408 on enclosed inquiry slip

How to shockproof 300 ft. of conveyor!



With 300 feet of conveyor—and an intermittent loading of from 50 to 250 full bottle cases in the plant of a Milwaukee bottler, two electric motors fought against each other. A Twin Disc HYDRO-SHEAVE Drive was installed at each power station—installed in a few minutes directly onto the motor shaft, in the normal sheave position.

The HYDRO-SHEAVES, by transmitting the power through fluid, permit a *soft balanced* drive in which motors can pick up a full load cleanly, without jerking or stalling to eliminate entirely many of the reasons for costly operation.

You, too, can save dollars and smooth out the cycle with HYDRO-SHEAVE Drives—manufactured only by Twin Disc. Write today for Bulletin No. 145-B or a complete file of Installation Reports.

TWIN DISC
CLUTCHES AND HYDRAULIC DRIVES

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois

▲ For more details circle **NED-2409** on enclosed inquiry slip ▲

Put Your Finger on Material Handling Costs IN YOUR OWN PLANT!

Let us send you—free and without obligation—our brand new "Material Handling Analysis Guide" that helps *you* study material handling problems in your own plant...and reveals how you can improve material handling efficiency and save money in *your* business.

Add Man-Hours Without Increasing Workloads

Find out how you can join those in all lines of industry who have already found the way to eliminate back-breaking, old-fashioned, hand handling . . . speed production...move more goods faster . . . add to productive capacity without increasing personnel workload.

"101" Transporter
A PRODUCT OF AUTOMATIC

WRITE NOW FOR YOURS—
Automatic
61 West 87th Street, Dept. C2
Chicago 20, Illinois

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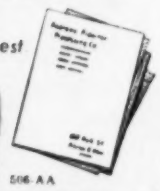
FOAM-FABRIC COMBINATIONS

Thin gauge foamed latex integrated with fabrics!

Cushioning action of foam plus tensile strength of cloth...ANDAL combinations provide both. The exclusive **ANDAL** process actually embeds fabrics in latex foam prior to its vulcanization. The result is a positive union which withstands laundering and even boiling in soap or detergent. Because the porosity of both materials is retained, foam-fabric combinations have a natural "breathing" action.

ANDAL materials can be cut, sewed, tacked, stapled or cemented. Available in widths from 45 to 66 inches and in foam thicknesses from 1/16 to 1/4-inch. Colors and foam densities to specifications.

Samples available on letterhead request

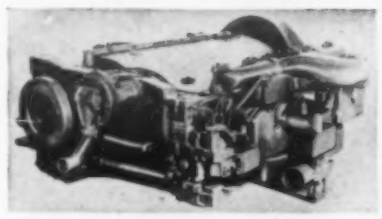


ANDREWS-ALDERFER COMPANY, INC. • 1102 HOME AVE., AKRON 10, OHIO

506-AA

▲ For more details circle **NED-2411** on enclosed inquiry slip ▲

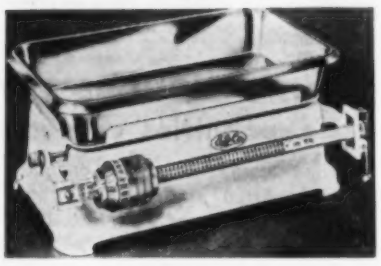
HORIZONTAL DIESEL ENGINE is rated 200 hp at 2100 rpm



Design of this six cylinder 200-hp model NHHB-600 horizontal diesel engine adapts it particularly for underfloor installation in busses, rail cars and other mobile equipment. It measures approximately 64 in. long, 55 in. wide and 23 in. high. Other specifications are 15.5:1 compression ratio, 743-cu in. displacement, 2285-lb weight, 5⅛-in. bore and 6-in. stroke. Made by **Cummins Engine Co.**, Columbus, Ind.

▲ For more details circle **NED-2412** on enclosed inquiry slip ▲

WEIGHING BALANCE has only one beam weight



Mechanism that employs no auxiliary weights is incorporated in one-pan Beranger type balance for various weighing operations. Unit's only beam weight is moved along beam until balance is brought into rough equilibrium. Final adjustment is made on micrometer, an integral part of beam weight. Balances are finished in white enamel and have detachable chrome-finished pan. Flat plate can be specified on largest size. Capacities range from 6 to 14 kilograms and dimensions range from 32 x 21 x 13 to 38 x 26 x 14 in. Made by **Emil Greiner Co.**, Dept. NE, 20-26 N. Moore St., New York 13, N. Y.

▲ For more details circle **NED-2413** on enclosed inquiry slip ▲

FREE-RUNNING LOCKNUT withstands 1600° F without seizure

Capable of withstanding repeated use, this seating type, free-running and self-energizing locknut will withstand temperatures up to 1600° F without thread seizure. Grooved washer at bottom of nut is pressed over threaded section suspended from main body of nut, which is made of various materials. Nuts spin freely on bolt down to work. After proper torque is applied, washer compresses, causing threaded section inside washer to move in and lock radially on bolt. When threaded section inside washer picks up all the load it can carry, it elongates a few thousandths of an inch, permitting bulk of load to move up into main body of nut. This reduces high stress concentration and torsional load in first few threads of nut and bolt. Made by **Klincher Locknut Corp.**, 2154 Hillside Ave., Indianapolis, Ind.

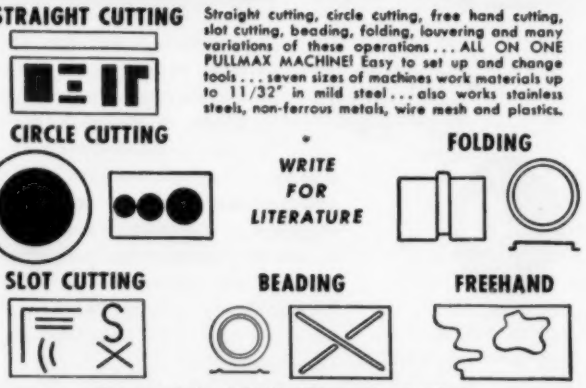
▲ For more details circle **NED-2414** on enclosed inquiry slip ▲

WORKING SHEET OR PLATE STEEL?

LOOK at what PULLMAX CAN DO

STRAIGHT CUTTING

Straight cutting, circle cutting, free hand cutting, slot cutting, beading, folding, louvering and many variations of these operations... ALL ON ONE PULLMAX MACHINE! Easy to set up and change tools... seven sizes of machines work materials up to 11/32" in mild steel... also works stainless steels, non-ferrous metals, wire mesh and plastics.



WRITE FOR LITERATURE

See us at the A.S.T.E. Show—Booth 1943
Write for tickets.

AMERICAN PULLMAX CO., INC.
2457 N. SHEFFIELD AVENUE, CHICAGO 14, ILLINOIS

▲ For more details circle **NED-2415** on enclosed inquiry slip ▲

America's first and finest
CROZIER TOOL POST TURRET

now with 12 position indexing

12 position indexing now makes possible the alignment with work at any thirty degree increment.

This is only one of the outstanding features developed by the first and largest manufacturer of turrets for small lathes. Other features include built-in cut-off tool and holder and positive rapid indexing. All wearing parts are hardened and precision fit. They are available in three sizes.

Switch to Crozier Tool Post Turrets today. Save as much as 75% set-up and down time in lathe operations. In Crozier, you have America's precision-built tool post turret. Write for catalog.

CROZIER MACHINE TOOL CO. Dept. NED 3
Hawthorne, California

▲ For more details circle **NED-2416** on enclosed inquiry slip ▲

Your Entire Stock of Drills... Seen at a glance

HUOT DRILL DISPENSER

for

• TOOL CRIBS • STOCK ROOMS • MACHINE SHOPS

Saves Time hunting through stacks of packaged drills. Compartments hold a gross of small sizes—a dozen or more of the larger ones. Raised letters on easy sliding drawers . . . hammerlin gray baked enamel finish . . . 14½"x7¼"x7¼".

Write for Circular
Model No. 1: Fractional drills 1/16" to ½"
Model No. 2: Number drills 1 to 60
Model No. 3: Letter drills A to Z

HUOT MFG. CO. 571 NORTH WHEELER ST. PAUL 5, MINNESOTA

▲ For more details circle **NED-2417** on enclosed inquiry slip ▲

Over 85% of the torque wrenches used in industry are

STURTEVANT TORQUE WRENCHES

Read by Sight, Sound or Feel

- Permanently Accurate
- Practically Indestructible
- Faster—Easier to use
- Automatic Release
- All Capacities

in inch ounces ...inch pounds ...foot pounds
(All sizes from 0-6000 ft. lbs.)

Every manufacturer, design and production man should have this valuable data. Sent upon request.

P.A. STURTEVANT CO.
ADDISON QUALITY ILLINOIS

▲ For more details circle **NED-2418** on enclosed inquiry slip ▲

REACH
HIGH PLACES
SAFELY

A Ballymore Safety Step Ladder provides safe, sure footing in high places wherever you need it, prevents accidents and fear of accident.

Readily portable on ball bearing casters, but can't roll or kick out when supporting a person . . . weight automatically retracts casters, gives firm 4-point grip by rubber-tipped legs.

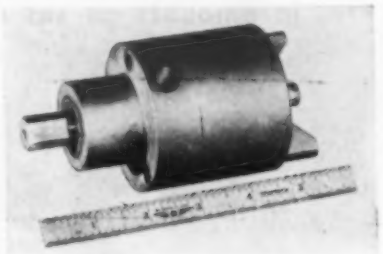
All steel construction. Three to eight steps with, one to three steps without, hand rails.

WRITE TODAY FOR COMPLETE CATALOG

BALLYMORE COMPANY
WAYNE 3, PA.

For more details circle NED-2419 on enclosed inquiry slip

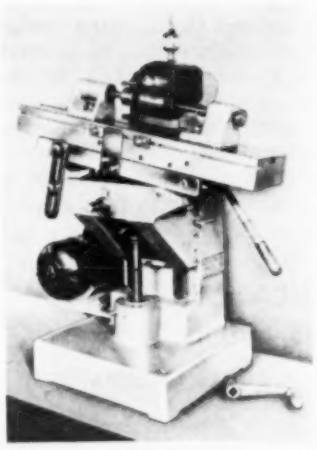
ROLLING VANE PUMP
handles light viscosity fluids



Having capacity of ¼ to 1½ gpm, Magna-Mite positive displacement pump is suitable for handling fuel oil, gasoline, hydraulic fluids and other light viscosity fluids. Rollers replace conventional vanes to minimize friction and wear against pressure chamber. Measuring only 2¾ x 6 in., pump is available in constant displacement, adjustable displacement, and variable and reversible displacement types. All operate in any position and in either direction of rotation. Practical speed range is 300 to 3600 rpm. Made by **Milwaukee Hydropower, Inc.**, 3443 N. 35th St., Milwaukee 16, Wis.

For more details circle NED-2421 on enclosed inquiry slip

COMPACT MILLING MACHINE
for use with carbide tools



Engineered for high speed production applications using carbide tools is this compact commutator undercutting milling machine. It features high speed Parker Majestic spindle, heavy cast iron frame, preloaded ball bearing table with tilt provisions for better visibility, hardened and ground elevating screws, ½-hp motor with V drive and lube fittings throughout. Machine is not to be confused with company's light equipment now on market. Made by **Gay-Lee Co.**, 73 W. Fourteen Mile Rd., Clawson, Mich.

For more details circle NED-2422 on enclosed inquiry slip

SUBMINIATURE TUBE SOCKETS
designed for electronic equipment

Injection molded of glass-bonded mica, subminiature tube sockets have cadmium-plated brass contact terminals or silver-plated beryllium copper terminals. Center shields are optional. Features include low loss factor, insulation resistance of 50,000 megohms and operating temperature up to 135° C. Sockets mount without screws or rivets in shaped chassis holes. Made by **Mycalex Tube Socket Corp.**, Clifton 6, N. J.

For more details circle NED-2423 on enclosed inquiry slip

MORE SOLD THAN ANY OTHERS
Write for Catalog
OF USES
AND SPECIFICATIONS

GENERAL
Industrial
Pneumatic Tires

..SAVE TIME·LABOR·MONEY
Protect equipment and floors • Reduce Breakage

★ Wide Base Wheel
★ More Air Volume
★ More Stability
★ More Load Capacity
★ Longer Miles in Hi-Speed Service

Available separately or in assemblies of Tires, Tubes and Wheels. Size O. D. 8" to 27"—200 to 4000 lbs. cap. for low and high speeds.

Rigid CASTER FORKS *Swivel*

Wide-base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

Send for Catalog • Dept. 4

THE GENERAL TIRE & RUBBER CO. AKRON, OHIO

For more details circle NED-2420 on enclosed inquiry slip

SEE FOR YOURSELF—Next time try a
FORT WORTH TRANSCO QD SHEAVE

FORT WORTH WAREHOUSES MEAN BETTER V-DRIVE SERVICE

You will receive the best in service, sheaves, and V-belts when you buy a Fort Worth-Transco V-drive.

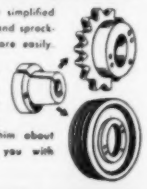
Two manufacturing plants and a large foundry, designed to make sheaves, assure volume production even in periods of short supply. Factory warehouses in most large industrial centers supplemented by numerous stocking distributors provide quick delivery of stock sizes.

We will be pleased to advise you the name of your nearest stocking distributor.

"QD" HUB ALSO FITS NEW FORT WORTH "QD" Roller Chain Sprocket

Speed changes are simplified and "spare" sheaves and sprockets can be carried more easily.

If your favorite distributor doesn't stock the Fort Worth QD line — both sheaves and sprockets, tell him about them. He'll reward you with better service.



Write for descriptive catalogs on "QD" Sprockets and Sheaves, and they will be sent to you immediately.

OTHER FORT WORTH PRODUCTS
ROLLER CHAIN SPROCKETS
SCREW CONVEYORS and ACCESSORIES
SCREW ELEVATORS
INDUSTRIAL FANS

FORT WORTH STEEL AND MACHINERY CO.
Dept. 223, 3600 McCart St. FORT WORTH, TEXAS

For more details circle NED-2424 on enclosed inquiry slip

NOELTING Faultless ENGINEERED TRUCK CASTERS
CUT HANDLING COSTS

NEW!
DOUBLE ACTION SPRING CASTER

Doubles Caster Life and Service

Swivel and Rigid Units

Durable, Long-lasting Spring and Draw Bars, on centerline of wheel, prevent offset of load.

Interchangeable Standard Wheels

Wheel contacts floor surface at all levels—eliminates bounce—doesn't raise truck when mounting obstacles.

Write for descriptive literature, no obligation.

FAULTLESS CASTER CORPORATION
Dept. NE, Evansville 7, Indiana
Branches in Principal Cities—Canada Factory: Stratford, Ont.

For more details circle NED-2425 on enclosed inquiry slip

FABRICS & TAPES For ALL INDUSTRY

FLIGHTEX
FLIGHTEX FABRIC
FABRICS

• COTTON
• VINYON
• RAYON
• NYLON
• GLASS

If you use special industrial fabrics and mechanical tapes, you'll find Flightex a dependable source of supply. Our staff of engineers is at your service to help solve your fabric and tape problems.

Write for Complete Information

FLIGHTEX FABRICS, Inc.
91 Worth Street New York 13, N. Y.

For more details circle NED-2426 on enclosed inquiry slip

Get "Spot Sources" of Hot Water this way

Save Money and Space

Here's an economical way to get avoids long runs and heat waste. an extra supply of hot water for It is heated with live steam—up washrooms, laundry, dishwash- to 125 lbs. through the shell . . . ing or any service that overbur- or with exhaust steam or boiler dens your present supply. Install water. Largest of 12 sizes only a GENERAL Instantaneous 15" by 120". Capacities: 6 to 300 Water Heater. This compact gallons of clear, rust-free hot heater can be readily tapped into water per minute through seam- pipe lines at any strategic spot less copper tubing. Bronze throughout your building. No heads. Write for illustrated Cat- tank! No excavating! No com- alog 60. General Fittings Co., plicated piping! The GENERAL Dept. I, 123 Georgia Ave., Instantaneous Water Heater Providence 5, R. I.

GENERAL
TANKLESS AND INDIRECT WATER HEATERS AND HEATING SPECIALTIES

For more details circle NED-2427 on enclosed inquiry slip

ODEE-HONE

FOR FINISHING EXTERNAL CYLINDRICAL SURFACES

Can be used on any drill press, lathe or electric drill.

Generates round, straight surfaces with any desired surface finish.

For complete information write or call

MICROMATIC HONE CORPORATION
8100 SCHOOLCRAFT • • • DETROIT 4, MICHIGAN

For more details circle **NED-2428** on enclosed inquiry slip

SAVE on ring-shaped metal parts

Cut material and machining costs on ring-shaped parts up to 72" diameter, up to 16 square-inch cross section by letting Dresser form and flash-weld them from bar or plate. Specialized equipment permits very close tolerances.

GET THE DETAILS: Send today for our "RINGS FOLDER" . . . shows method and results.

DRESSER RINGS

Dresser Manufacturing Division, 109 Fisher Ave., Bradford, Pa.
(One of the Dresser Industries)

For more details circle **NED-2429** on enclosed inquiry slip

STA-WARM COMPOUND MELTERS NOW MORE POPULAR THAN EVER

D. O. Contractors Break Bottlenecks with Improved Sta-Warm Heaters

VARIETY OF TYPES AND SIZES TO SUIT

50 gallon compound melter with motor driven agitator and molasses gate valve.

Defense Order contractors who are forced to step up production and dispensing of melted compounds to match increased machining and assembly schedules are turning to Sta-Warm. Here prompt delivery of many types and sizes of compound and soft metal melters are being shipped to perform both ordinary and unusual compound melting operations.

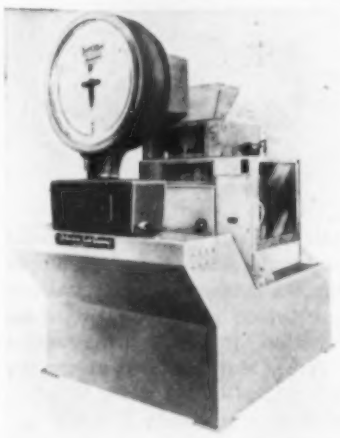
With capacities from 1 pint to any practical gallonage, all designed to fit snugly into special compound melting applications . . . with high efficiency plus economical operation . . . D.O. contractors know many standard Sta-Warm heaters are available to them.

For compound melters, the first place to inquire is Sta-Warm.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

For more details circle **NED-2430** on enclosed inquiry slip

AUTOMATIC SELECTIVE SCALE measures 2 to 12 ingredients in amounts as set on dials

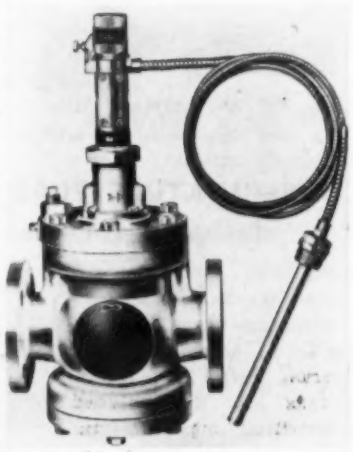


Automatic cumulative and consecutive weighing is possible with Select-O-Weigh system which offers flexibility in formula variation for all proportioning operations. Standard Richardson automatic scale is weighing element of system which operates from master control panel built to include as many setting dials as there are ingredients in formulas handled. Systems for from two to twelve separate ingredients can be operated. Scale operator, who can be located at any point in plant remote from actual weighing operation, sets each dial to correspond with amounts in formula.

Sequence of adding materials and their timing are selectively controllable. After setting control panel, 'start' button is pressed. As screw feeder mechanism delivers amounts of material to scale, action is visible on scale dial. Tare check circuit prevents scale from initiating next weighing unless all material is cleared from weigh hopper and unit is in perfect empty balance. Made by **Richardson Scale Co.**, Van Houten Ave., Clifton, N. J.

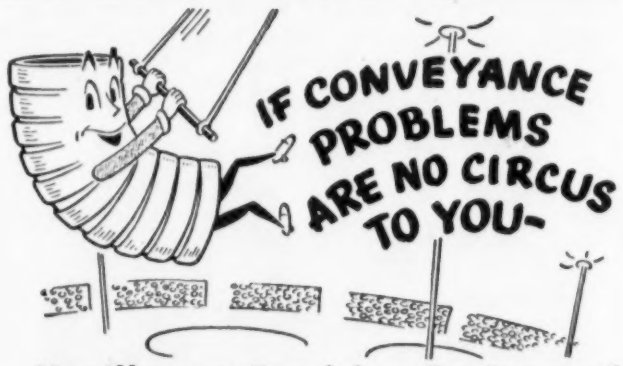
For more details circle **NED-2431** on enclosed inquiry slip

TEMPERATURE REGULATOR accurate to plus, minus 1° F



Design simplicity of type 1005 self-operated temperature regulator allows quick, easy disassembly for relapping and cleaning in the field. Regulator also features visual finger-tip dial control, built-in strainers to protect pilot and main valves, stainless steel seats and disks and internal porting to minimize external damage and maintenance. Control accuracy of plus or minus 1° F is obtained by means of fully balanced, single-seated pilot operating on vapor flash principle. Ninety-nine per cent of power to position valve is taken directly from steam, while only one per cent is from vapor expansion in thermostatic system. Valve is available in 2 to 4-in. sizes with 125 or 250-lb ASA flanges for steam pressures from 10 to 150 psig and temperature control from 30° to 325° F. Adjustment range is 60° F. Eight feet of capillary tubing and 1-in. NPT connection on bulb are standard equipment. Made by **Farris Stacon Corp.**, 551 Commercial Ave., Palisades Park, N. J.

For more details circle **NED-2432** on enclosed inquiry slip



..You'll want Precision-Engineered UNIVERSAL METAL HOSE

There are many types and sizes of UMH . . . each engineered to a purpose. UMH gives you the *most efficient, air-tight, fluid-tight conveyance possible* for gases, liquids and bulk solids at elevated pressures and temperatures.

And because of *advanced engineering design*, UMH Flexible Metal Hose is tough, rugged and highly effective in resisting heat, pressure, corrosion and constant vibration.

Let us carry your load . . . tell us your troubles . . . you'll get a lot of help from our engineers, and the exact hose required from the specialized UMH Line AVAILABLE NOW.

UMH
Seamless Flexible Tubing

UMH
Interlocked High-Pressure Hose

UMH
Interlocked Exhaust and Blower Tubing

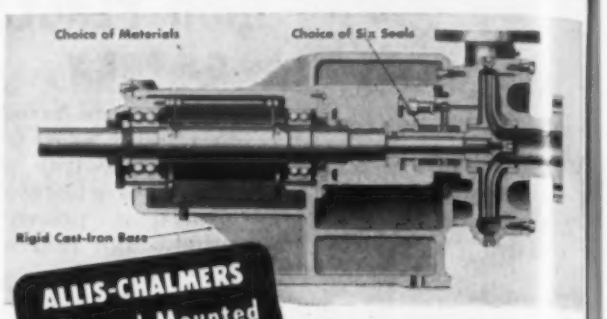
UMH
Square-Locked Low-Pressure Tubing

Remember . . . most UMH Metal Hose are still available. Send us your requirements and ask for Catalog U-101, for your handy reference file.

UNIVERSAL METAL HOSE CO.
2155 SOUTH KEDZIE AVE. CHICAGO 23, ILL.

For more details circle **NED-2433** on enclosed inquiry slip

TAILORED TO YOUR JOB



ALLIS-CHALMERS Pedestal-Mounted PUMPS

For Low Cost Per Gallon Pumped

HERE'S HOW it's engineered for your job! You start with the standard pedestal-mounted pump with its rigid cast iron pedestal; two heavy duty oil lubricated bearings; and big oil reservoir. Then, working with A-C engineers, the optional constructions are selected.

Shaft, sleeve, impeller, and wearing rings are all available in many types of material. In addition, six alternate sealing arrangements, including a water-cooled stuffing box, are available. Result: Low cost per gallon pumped!

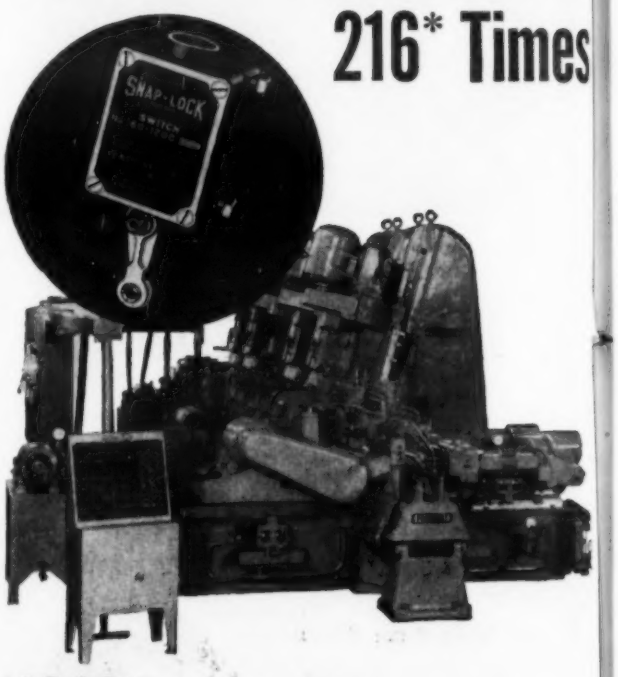
Capacities to 1200 gpm, heads to 250 feet, temperatures to 500 degrees F. Call your nearby A-C district office or write Allis-Chalmers, Milwaukee 1, Wisconsin.

ALLIS-CHALMERS

A-3617

For more details circle **NED-2434** on enclosed inquiry slip

Confidence Compounded 216* Times



*216 APPLICATIONS OF SNAP-LOCK TRADE MARK LIMIT SWITCHES ON FOOTBURT TRANSFER MACHINES

This Footburt automatic transfer machine is one of seven in a line, built for finishing cylinder heads in a large automotive engine plant. The bank of machines is over 200 feet long and uses 216 Namco Snap-Lock Limit Switches to control 11 precisely indicated operations such as drilling, milling and tapping.

Foote-Burt of Cleveland, one of the oldest and most widely accepted builders of cost-cutting transfer machines, has standardized on Snap-Lock for years, for these and other continuous-flow machines. Here is confidence proved by performance—nowhere is dependability at a greater premium. A single failure might cripple the whole line—with costly consequences in lost time and materials.

Foote-Burt—*and more than 90% of American machine tool builders*—specify Snap-Lock for trouble-free service under the extremes of heavy-duty operation. There's a type and size for every industrial application. May we show you how they can be designed into your product?

The complete range of Namco Standard Snap-Lock Limit Switches is illustrated and tabulated in Engineering Bulletin EM-50. Find out about their five exclusive design and construction features.

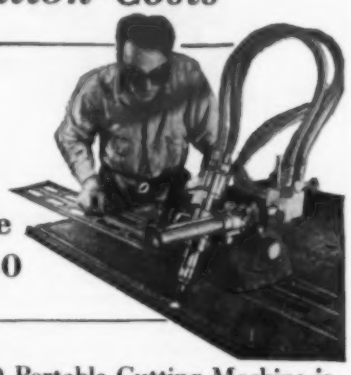
ELECTRICAL MANUFACTURING DIVISION
182 East 131st Street • Cleveland 8, Ohio

NATIONAL ACME
CLEVELAND, OHIO

For more details circle **NED-2435** on enclosed inquiry slip

Speed Production.... Cut Fabrication Costs

With this Low-Priced Oxy-Acetylene Cutting Machine OXWELD CM-30



The OXWELD CM-30 Portable Cutting Machine is for cutting straight lines and bevels on metals up to 4 in. thick. It also will cut circles from 2¾ to 96 in. in diameter, and can be hand guided for simple shapes.

Convenient to Use

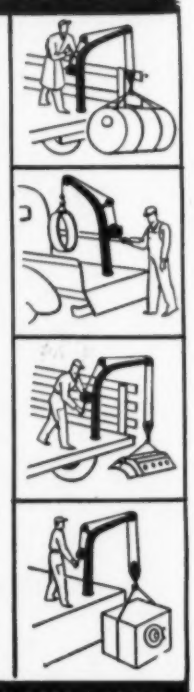
The CM-30 can be operated either on lightweight track for straight-line cutting, or on the work itself for cutting circles.

Write for a descriptive folder.

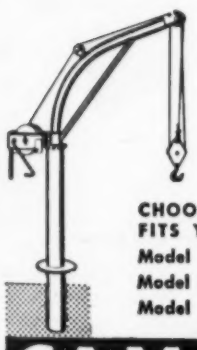
LINDE AIR PRODUCTS COMPANY
A DIVISION OF UNION CARBIDE AND CARBON CORPORATION
30 East 42nd Street UCC New York 17, N. Y.
In Canada: Dominion Oxygen Company, Limited, Toronto

▲ For more details circle **NED-2436** on enclosed inquiry slip ▲

BLUE HERON
TRUCK CRANE SAVES..
TIME • MONEY • LABOR



ONE MAN can handle up to ONE TON easily with BLUE HERON TRUCK CRANE—and with greater safety! Crane swivels through full circle and can be lifted from socket by one man—leaving truck body clear. Many operators equip all trucks with sockets, change cranes from truck to truck as needed. Simple to install!



CHOOSE THE MODEL WHICH FITS YOUR REQUIREMENTS
Model O.C.30A Cap. 500 lbs.
Model O.C. 30B Cap. 1000 lbs.
Model O.C.30C Cap. 2000 lbs.

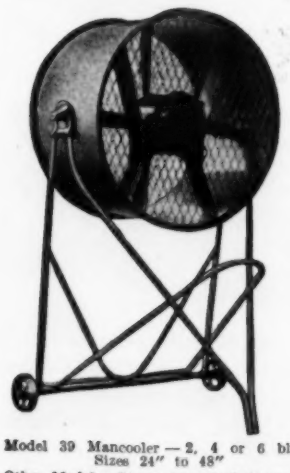
CAM TOOL COMPANY, INC.
288 22nd STREET • OAKLAND 12, CALIF.

▲ For more details circle **NED-2437** on enclosed inquiry slip ▲

ADD COMFORT . . . SPEED PRODUCTION

with Aerovent FAN

FANS
MAN COOLING



Keep your employees cool for more efficient work. Aerovent "Macheta" airfoil fans are efficient and economical.

Certified Ratings — PFMA

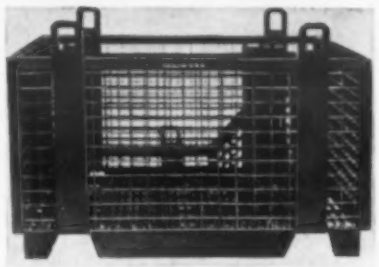
Model 39 Mancooler — 2, 4 or 6 blade Sizes 24" to 48"
Other Models: Direct Connected, Extended Shaft, Duct Type, Belt Driven, Pulley Drive. Sizes 12" to 144".

WRITE TODAY FOR ENGINEERING BULLETIN

AEROVENT FAN CO., Inc.
Ash & Brown Streets, Piqua, Ohio
Competent Sales Engineers in Principal Cities

▲ For more details circle **NED-2438** on enclosed inquiry slip ▲

CUSTOM-BUILT TOTE BOXES
adapted to specific handling needs

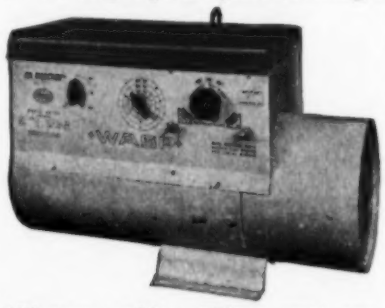


Open steel-grating tote boxes can be made to any size, shape or form to meet special requirements or individual specifications. Illustrated box is designed for handling hot forgings. Open grating construction permits rapid cooling and facilitates cleaning. Straps carry load and assure ease of tiering and moving by cranes. Custom-built tote boxes made by **Kerlow Steel Flooring Co.,** Dept. NED, 222 Culver Ave., Jersey City 5, N. J.

▲ For more details circle **NED-2439** on enclosed inquiry slip ▲

ARC WELDERS
150 and 200 amp direct current units

Volt ampere characteristics of model GA Wasp direct current arc welders make them suited to direct current straight polarity Heliwelding with Thor-Tung. Made in 150 and 200 amp sizes, welders have good commutation at all settings, plus advantages of self-excitation and split pole, cross-field design. Welding current overlaps, from 30 to 250 amp on 200-amp model and from 20 to 185 on 150-amp welder. Either unit can be mounted on two-wheeled carriage. Available from **Air Reduction Sales Co.,** Dept. NED, 60 E. 42nd St., New York 17, N. Y.



▲ For more details circle **NED-2440** on enclosed inquiry slip ▲

INFRARED SPECTROMETER
eliminates most scattered radiation

Developed for use in chemical analyses to determine structure, concentration and identity of complex chemical compounds, model 112 infrared spectrometer provides double monochromator performance with single monochromator simplicity. New optical principle permits greater resolution, improved signal-to-noise ratio and virtual elimination of scattered radiation. Instrument employs model 99 double-pass monochromator which reflects radiation twice through same optical system. Other features include simple prism interchange, mobile mounting console, automatic wavelength speed scheduling, micro and macro sampling and provision for polarization studies. Made by **Perkin-Elmer Corp.,** Danbury Rd., Norwalk, Conn.

▲ For more details circle **NED-2441** on enclosed inquiry slip ▲

TIGHT!
...but how tight?

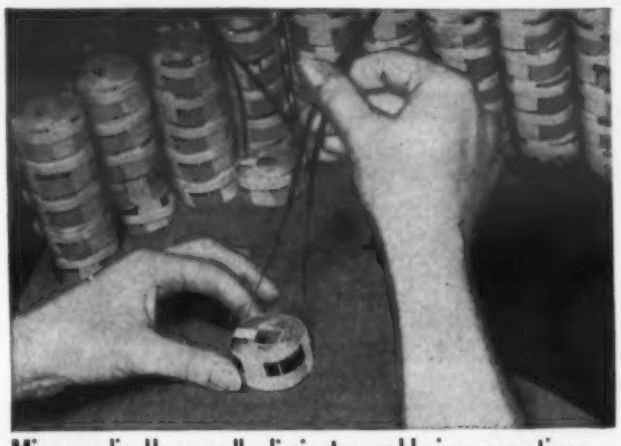
Tight enough to shear off the nut . . . wasting time and material? Or is it exactly right, precision tight?

There's never *any* question, with Apco Mossberg Torque Wrenches . . . precise, pre-determined measurement of final tension on nuts and bolts is yours at a glance. Dial readings are instantaneous and unerringly accurate . . . there are no springs or intricate parts to get out of kilter. Apco torque wrenches are lighter, easier to handle than any other wrench of comparable size and style . . . narrow heads make work easy in awkward, hard-to-get-at places. Best of all, there's an Apco Torque Wrench for every job in the shop . . . a complete range of sizes, from 280 inch grams to 2000 ft. pounds.

Write for complete information on Apco Mossberg Torque Tools today . . . they're so *easy* to use, so *hard* to do without.

APCO MOSSBERG CO.
Attleboro, Mass., U.S.A.

▲ For more details circle **NED-2442** on enclosed inquiry slip ▲



Minneapolis-Honeywell eliminates soldering operations... by slipping TEMFLEX 105 over coil leads

Use of Temflex 105 flexible plastic tubing for insulating coil leads in the RA 117 Protectorelay oil burner control eliminates soldering the leads to insulated wires—a substantial cost saving, according to Minneapolis-Honeywell Regulator Co. Temflex 105 Tubing is approved by Underwriters' Laboratories for 90°C operation in oil, as well as for continuous operation at 105°C. In addition to this superior oil resistance, it has good resistance to mineral and coal tar solvents, acids and alkalies. *Get the full story—write for Temflex 105 technical data sheet.*

LOOK TO IRVINGTON FOR INSULATION LEADERSHIP

IRVINGTON
VARNISH & INSULATOR COMPANY
IRVINGTON 11, NEW JERSEY
Plants: Irvington, New Jersey; El Monte, Calif.; Hamilton, Ont., Canada

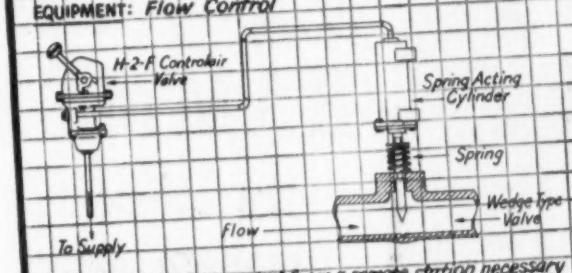
▲ For more details circle **NED-2443** on enclosed inquiry slip ▲

Ideas for Engineers

INDUSTRIAL PRODUCTS DIVISION — WESTINGHOUSE AIR BRAKE COMPANY WILMERDING PENNA

Datair Sheet #6

EQUIPMENT: *Flow Control*



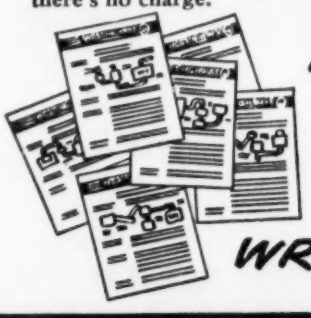
APPLICATION: *Accurate control from a remote station necessary to a chemical process to provide positive adjustments in small increments.*

SOLUTION: *Line equipped with Westinghouse H-2-F Controlair Valve and Westinghouse Single Acting Cylinder (modified by adding external spring).*

RESULT: *The Controlair Valve, remotely located, provides graduated pressure to spring-opposed cylinder with lifts or lowers valve wedge to change rate of flow as desired. Spring plus force needed to move gate are equal to cylinder force at any sitting. This accurate remote control is secured at minimum cost.*

Typical of the way AIR Solves the Control Problem!

There are as many ways to solve Control Problems with W A B Pneumatic devices as there are Plant Engineers who apply them with marked success. The case outlined above is an example. Our Engineering Data File will provide you with details concerning this case and many others. It is probable that some may be applied to your problems. Send for them—there's no charge.



FREE
This Engineering Data File

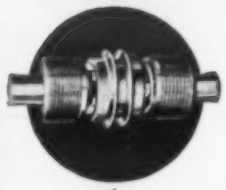
WRITE

INDUSTRIAL PRODUCTS DIVISION — WESTINGHOUSE AIR BRAKE COMPANY WILMERDING, PENNA.

Factory Branch: EMERYVILLE, CALIF.
Distributors throughout the United States . . . Consult your Classified Directory. Distributed in Canada by: Canadian Westinghouse Co., Ltd., Hamilton, Ontario.

▲ For more details circle **NED-2444** on enclosed inquiry slip ▲

Provides Mechanized "Muscles"



for Pipe Threading Jobs

Much of the manual labor has been taken out of pipe threading by the Toledo Pipe Threading machine shown above. And ROCKFORD Pullmore CLUTCHES help it handle this operation much faster and better than previous cutters. Let ROCKFORD help modernize the power transmission control design for *your* next model.

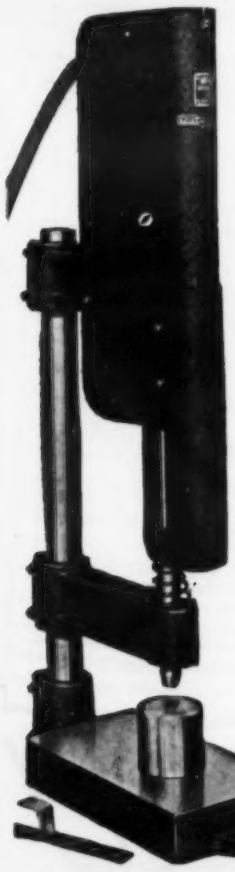
B-W ENGINEERING MAKES IT WORK
B-W PRODUCTION MAKES IT AVAILABLE

ROCKFORD CLUTCH DIVISION BORG-WARNER
312 Catherine Street, Rockford, Illinois, U. S. A.

ENGINEERING BULLETIN SENT ON REQUEST

ROCKFORD CLUTCHES

For more details circle NED-2445 on enclosed inquiry slip



BOOST OUTPUT with *Impact* AIR HAMMER

the efficient modern method for

PUNCHING . . . . . RIVETING
ASSEMBLING . . . . EMBOSSING
FORGING . . . . . FORMING
PEENING . . . . . MARKING
CRIMPING . . . . . CUTTING
BLANKING . . . . . COINING

Ready . . . Mead's new air-powered Impact Hammer . . . weighing only 27 pounds . . . yet having a wallop like a pile-driver! One of its outstanding applications is multiple piercing of large metal sheets before or after forming. It can punch holes as close together as 1¾" on centers. Value of the impact readily adjusted from 4,500 pounds down to only a few ounces. Set ups are quick, easy. Besides innumerable punching operations, with suitable attachments it is capable of upsetting rivets, blanking out soft materials with knife dies, light coining, forging operations, etc. Get complete facts on this versatile, handy new tool and other Mead Air Power devices. Write for Catalog.

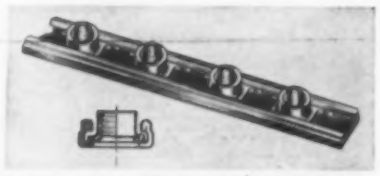
MEAD AIR OPERATED DEVICES *save precious man-hours!*

CATALOG READY
Send for copy of our new Air Power Catalog illustrating, describing many new man-and-money-saving devices.

MEAD SPECIALTIES COMPANY
4114 NORTH KNOX AVENUE
DEPT. NA-32 • CHICAGO 41, ILL.

For more details circle NED-2446 on enclosed inquiry slip

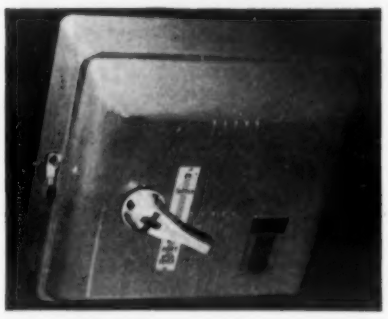
GANG CHANNEL FASTENER for close center-to-center spacing



Small compact design of Kaylock gang channel multiple lock-nut fastener makes its application interchangeable with standard AN-366 anchor nut. Made of 24 ST Alclad aluminum alloy to Army and Navy Air Force specifications, channel portion features double-vertical wall with high push-out resistance and maximum rigidity. Small spring steel lightweight lock-nuts are used as inserts and their size allows close center-to-center spacing. Inserts are made elliptical at upper portion, then heat treated to provide flexible thread that grips bolt without auxiliary locking device. Sizes range from 8-32 through ¼-in.-28 and can be had in regular hole spacing or any hole pattern. Made by **Kaynar Mfg. Co.**, Kaylock Div., Engineering Dept. D-50, 820-A E. Sixteenth St., Los Angeles 21, Calif.

For more details circle NED-2447 on enclosed inquiry slip

MOTOR STARTER equipped with circuit breaker

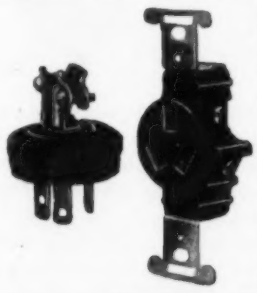


Combination across-the-line motor starter and circuit breaker has components mounted side by side. Unit has self-indicating slamproof handle with separate positions for on, tripped, off, reset and open cover. Up to three different padlocks can be used. Starter is available in sizes 0, 1 and 2 in sheet steel enclosures for NEMA type I, IA and V. Modifications offered on special order include built-in control circuit transformer, start-stop pushbuttons, hand-off-auto selector switch, control relay, extra electrical interlocks and inductive shunts. Made by **Westinghouse Electric Corp.**, P. O. Box 2099, Pittsburgh 30, Pa.

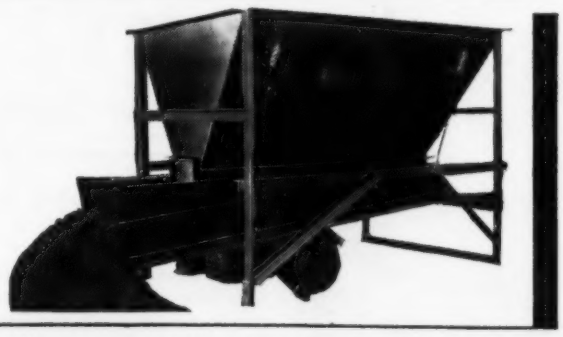
For more details circle NED-2448 on enclosed inquiry slip

3-WIRE RECEPTACLE & CAP for heavy duty applications

Rated at 15 amp, 125 v or 10 amp, 250 v, 5000 series of heavy duty three-wire polarized flush receptacle and cap of black Bakelite are listed as standard by Underwriters' Laboratories. Receptacle is of one piece construction and has double contacts, three large terminal screws, underslung heavy steel strap and permanently riveted assembly. G-type is grounded to strap and has two terminal screws for wiring. Cord grip cap is for 0.460-in. diameter cable. It has two-screw steel clamp, 1½-in. OD, solid brass blades and three large terminal screws. Made by **Leviton Mfg. Co.**, 236 Greenpoint Ave., Brooklyn 22, N. Y.



For more details circle NED-2449 on enclosed inquiry slip



If you use bin-stored materials you can handle them better with a Simplicity Os-A-Veyor type bin feeder

If you move anything that can be stored in a bin, chances are a Simplicity Os-A-Veyor type bin feeder will cut handling costs and speed up your operations. Simplicity Bin Feeders practically eliminate bridging and stoppage because they feed from the full length of the bin—materials will flow as you need them. Simplicity bin feeders are ideal, too, for storing and moving materials that are improved by tempering. Simplified power and operating mechanism keeps maintenance costs low, makes servicing easy. Write us today for complete information.

Simplicity ENGINEERING CO., DURAND, MICH. 101

For more details circle NED-2450 on enclosed inquiry slip

Just because that bathing suit is proper at the beach, she shouldn't assume it's proper for the classroom, too!

And just because one bearing is best lubricated by one particular grade of oil, you shouldn't assume that the same oil is best for *all* bearings on that machine. In many cases it isn't.

OIL CUPS permit you to lubricate each bearing with the oil best suited to that bearing—thus prolonging bearing life, reducing maintenance costs, cutting down-time, boosting production. And oil cups fortunately *cost very little.*

Gits oil cups have been the standard for industry for more than 40 years. Gits Bros. has the largest selection of oil cups available anywhere. Call on Gits Bros. for a prompt, efficient solution to your lubrication problems.

Write for free Catalog No. 60-A

GITS BROS. MFG. CO.
1833 S. Kilbourn Ave. • Chicago 23, Ill.

For more details circle NED-2451 on enclosed inquiry slip

NEW and MOST POWERFUL

ROTARY ELECTRIC IMPACTOOL

SIZE 34-U for 1¼" bolts

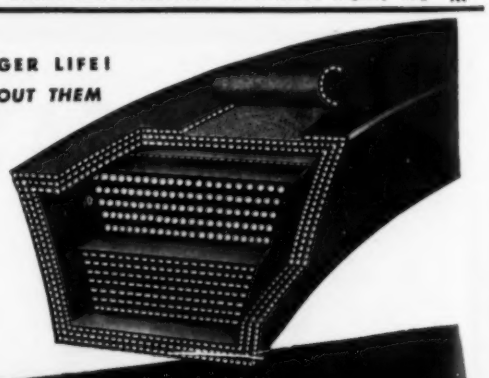
Weight—32½ lbs.
Height—10⅝"
1" square driver
110-volt AC-DC

— *makes the toughest jobs easy.*
— *sold by leading automotive jobbers and distributors.*

Ingersoll-Rand
11 Broadway, New York 4, N. Y.
623-18

For more details circle NED-2452 on enclosed inquiry slip

FOR LONGER LIFE! —*ASK ABOUT THEM*



DODGE SEALED-LIFE V-BELTS

● The life is sealed in! Special cover protects tension members — insures *longer belt life.* Dodge Sealed-Life V-Belts are factory matched to TAPER-LOCK Sheaves for best performance. Stocked by Dodge Distributors. Write us for complete details.

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

DODGE *of Mishawaka, Ind.*

FIRST IN POWER TRANSMISSION MACHINERY

For more details circle NED-2453 on enclosed inquiry slip

AJUSTRITE

TRADE MARK

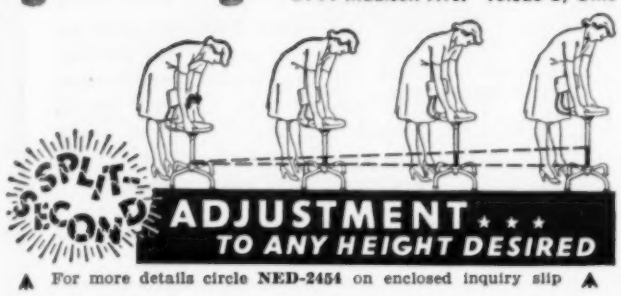
AUTOMATIC ADJUSTABLE CHAIRS

Ajustrite (formerly Kewaunee) adjustable chairs and stools are used extensively in Factories, Laboratories, Hospitals, Offices, Schools, Colleges, and Government Agencies. User adjusts to any desired height by merely lifting seat—no screws, bolts or tools.

Choice of 18 models. Height adjustment 15" to 20"; 24" to 35". Seats of plywood, hardwood, or molded FOAM RUBBER cushion. Self aligning back rests—horizontal and vertical adjustment.

Write for literature and free trial offer.

AJUSTO EQUIPMENT COMPANY
2144 Madison Ave. Toledo 2, Ohio



For more details circle NED-2454 on enclosed inquiry slip

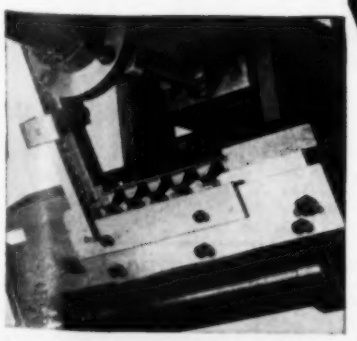
Don't Handcuff *Valuable* Manpower!

FREE IT FOR MORE IMPORTANT WORK— BY USING

DPS *Motorized* HOPPER UNITS

Modern production demands the speed and accuracy of this great aid to SELECTIVE FEEDING. It makes slow, manual methods obsolete and releases "frozen" manpower for more productive work. D.P.S. Motorized Hopper Units select, orient and feed production parts of a wide variety to a given position for primary and secondary operations. They are readily adaptable to all types of standard production equipment and special machines that would otherwise require constant attention by an operator.

SEE US AT THE A.S.T.E. SHOW MARCH, CHICAGO BOOTH NO. 140

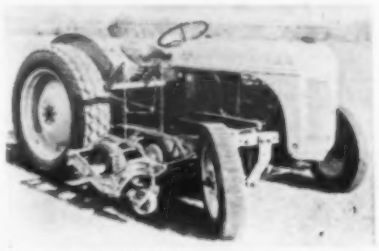


These illustrations show an interesting application, previously a problem of manual loading. Five terminals were to be inserted into the spark plug bodies simultaneously as the carrier progressed into the furnace for the firing operation. The carrier plates, illustrated, had equally spaced receiving holes drilled five abreast and were moved along an indexing conveyor with a momentary pause beneath the ram of the special inserting machine. At this pause the transfer slide (close-up) transferred five terminals into proper vertical position, at which time index of the conveyor cycled the machine and an air cylinder inserted the studs into the spark plug bodies, eliminating the manual insertion of the terminal studs.

DETROIT POWER SCREWDRIVER CO.
2819 W. FORT ST. DETROIT 16, MICH.

For more details circle NED-2455 on enclosed inquiry slip

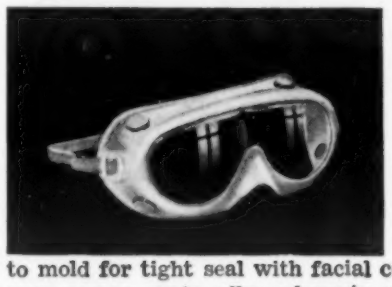
LARGE-AREA LAWN MOWER rubber drive wheels reduce shock



Developed for cutting large expanses of lawn where difficult cutting conditions exist, Special Purpose Challenger rear wheel drive mower is designed so that cutting units hug the ground at all times. This assures uniformity of cut without raising or lowering lift type mower. Elimination of side wheels reduces width, permitting closer mowing around trees and shrubs and contributing to maneuverability and facility in transporting from one area to another. Rubber drive wheels serve to eliminate shock to mowers. Power of rear wheel design drives mowers over tough grasses. Attachment is available for mowing high grass. Hand reel adjustment is incorporated for easy setting of bed knife without hand tools. Overhang of curbs is possible, thereby eliminating hand trimming. Made by **Roseman Mower Corp.**, 2040 Crawford Ave., Evanston, Ill.

For more details circle NED-2456 on enclosed inquiry slip

ACID SAFETY GOGGLE will fit over personal glasses



Full protection from all chemical splashes and dusts is afforded by Duo-Chem acid safety goggles constructed of soft vinyl plastic with vinyl optical plastic lens. Frame is bright yellow and soft enough to mold for tight seal with facial contours. Metal hoods over screen vents offer adequate ventilation. One-piece lens will not stain or discolor from acid fumes, vapors or splashes, and is easily replaceable. It is optically correct and meets Federal specifications for impact resistance. Goggle weighs a little over 1 oz and will fit over personal glasses. Made by **United States Safety Service Co.**, 1329 Oak St., Kansas City, Mo.

For more details circle NED-2457 on enclosed inquiry slip

FLEXIBLE FIXTURE FITTING swivel type has 30 degree swing

Made of cast metals which can be selected compatible to conduit system, type CS explosionproof, swivel flexible lighting fixture fittings conform to 1951 Code and is Underwriters' Laboratories approved for Class I, Groups C & D. Swivel joint is not subject to mechanical injury and has total swing angle of 30 degrees, universal movement. Threaded joints are free-floating and high temperature lubricated to avoid freezing. Fitting measures 7⅜ x 2¾ in. and is self-aligning. Made by **Russell & Stoll Co.**, Dept. 15, 125 Barclay St., New York 7, N. Y.

For more details circle NED-2458 on enclosed inquiry slip

You can provide easy mobility to a variety of industrial products with

IRONBOUND ALL-PURPOSE HANDLING UNITS . . .

POPULAR IRONBOUND FLO TRUK

● An easy to handle ruggedly constructed unit for carrying bulky and heavy loads at lowest cost. Seven standard sizes with one or two push handles makes it easy to select the proper truck for your requirements. Ask an Ironbound engineer for suggestions.

The HANDY for furniture and similar items.

The HAULER for cases, crates, tote boxes, etc.

The HUSKY for general use throughout the plant.

THE IRONBOUND "SAFETY-SKID" WITH ROUND CORNERS

Ironbound construction assures long hard use with complete safety to product and operator. Still the time proven method for handling of materials efficiently and economically.

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

For more details circle NED-2459 on enclosed inquiry slip

Photo courtesy of Indianapolis Machinery & Supply Co., Indianapolis, Ind.

Save up to 90% in Handling Time with E C & M Plate Magnets

Place the magnet on the work, turn on the power and steel is transported without delay. No time lost in affixing chains—no danger of pinching hands—the crane operator often works without a ground-man. Send us the facts of your operations so that we may write fully when sending Bulletin 903 describing EC&M Plate-magnets.

THE ELECTRIC CONTROLLER & MFG. CO.
2698 EAST 79TH STREET • CLEVELAND 4, OHIO

For more details circle NED-2460 on enclosed inquiry slip

MYSTIK Spra-Mask

Gives you Hand-Lettered Results with Speed and Low Cost of Stenciling

For fast, easy stenciling, get MYSTIK Self-Stik Spra-Mask. Die-cut to any design you wish, it sticks firmly to the surface to be painted, permitting one-man operation. There's no bleeding through the mask or under the edges to worry about. Just put it in place, cut the ties and spray. That's all you need to do for sharp, clear stencils. Available die-cut, in sheets, or in rolls of blank stock up to 36" x 60 yards inclusive. Write for information and free samples.
Mystik Adhesive Products,
2657 N. Kildare,
Chicago 39.

For more details circle NED-2461 on enclosed inquiry slip

IT'S THE BEST!

ROCKWOOD ball VALVES

Rockwood ball Valves are *best* because they last longer with no maintenance—are easy to open and close under pressure and will stay tight in a closed position. They handle many kinds of chemical fluids as well as abrasive or corrosive mixtures without injury to the seat or valve. Thousands of Rockwood ball Valves are giving continuous operation in chemical, food, paper, textile and other process plants, oil refineries and many other types of industries. Made in sizes from ½" to 4" for 300 p.s.i. working pressure. Write today for complete engineering data and prices.

Distributors in all principal cities.

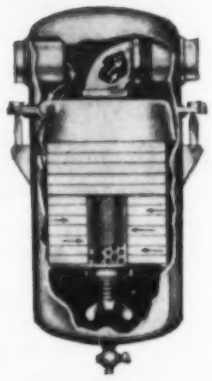
ROCKWOOD SPRINKLER COMPANY
44 HARLOW STREET WORCESTER 5, MASS.

For more details circle NED-2462 on enclosed inquiry slip

STAYNEW

ABSORPTION FILTERS PROVIDE SUPER FILTRATION!

—REMOVE LAST TRACES OF OIL AND MOISTURE FROM COMPRESSED AIR LINES



MODEL AAPH ABSORPTION FILTER

Many manufacturing processes and certain compressed air operated equipment require the removal of condensed oil and water vapors *completely* from the compressed air. In thousands of installations all over the country, Staynew Absorption Filters remove the last traces of oil and moisture and prevent failure of combustion and other pneumatic controls . . . keep maintenance time and cost at a minimum.

For Complete Information, Write Today For Bulletin B-1A.

Representatives in Principal Cities

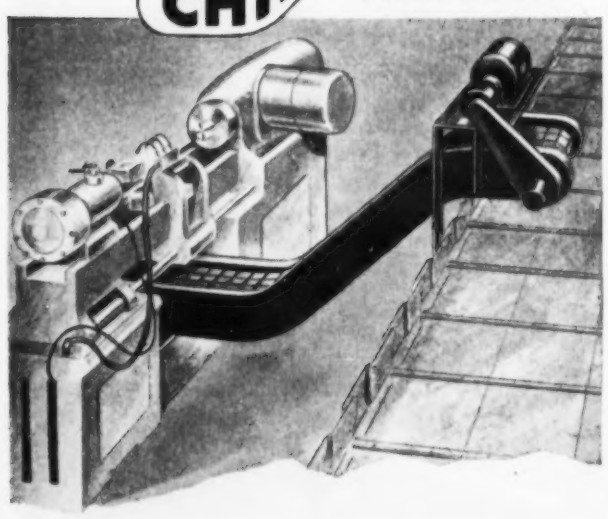
DOLLINGER PRODUCTS FOR STAYNEW FILTERS

DOLLINGER CORPORATION
49 Centre Pk., Rochester 3, N. Y.

ALL TYPES OF FILTERS FOR EVERY INDUSTRIAL NEED

▲ For more details circle **NED-2463** on enclosed inquiry slip ▲

Automatic Scrap Removal... WITH A CHIP-TOTE CONVEYOR



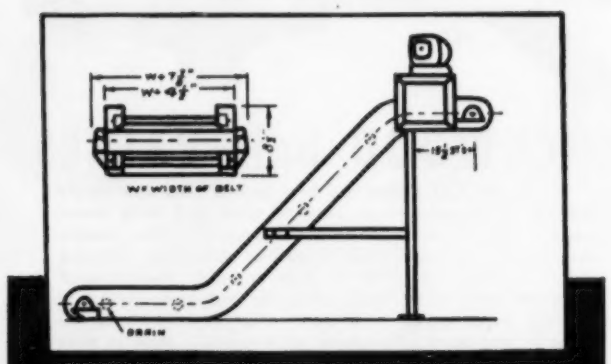
Continuous removal of chips, turnings and borings from operating automatic or multiple-spindle machines is now possible with the new MAY-FRAN CHIP-TOTE. Eliminating shut-down for manual scrap removal, it permits maximum production to be gained from equipment and manpower.

Hot, wet or dry scrap is funneled onto the CHIP-TOTE hinged-steel conveyor belt, carried horizontally until clear of the machine's working mechanism, and then transported up an incline for discharge into tote box or carry-off conveyor system.

The CHIP-TOTE can be furnished to fit practically any machine tool. Its speed of operation can be synchronized with the machine's metal removing capacity and rate of coolant flow.

Write today for further information.

474-MF

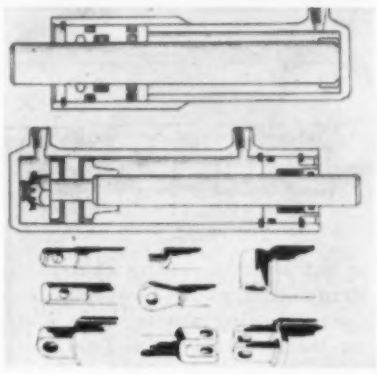


MAY-FRAN ENGINEERING, INC.

1711 Clarkstone Road • Cleveland 12, Ohio

▲ For more details circle **NED-2464** on enclosed inquiry slip ▲

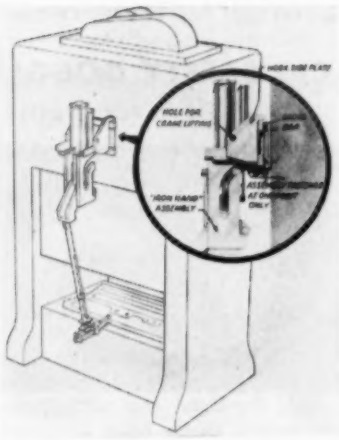
HYDRAULIC CYLINDERS in single and double acting types



Available with any of the six illustrated clevis mountings, single and double-acting hydraulic cylinders are of simplified design. Cylinders are offered with various strokes and diameters for pushing, pulling, clamping, operating and other needs. Made by **Unit Mfg. Co.**, Dept. I—7, 1221 Harmon Pl., Minneapolis 3, Minn.

▲ For more details circle **NED-2465** on enclosed inquiry slip ▲

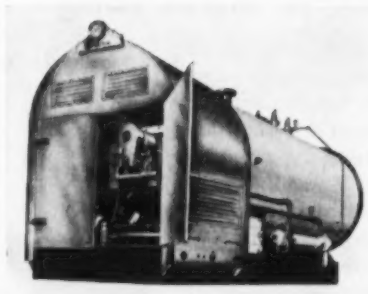
PRESS UNLOADER MOUNTING transfers quickly to other presses



Mounting arrangement for Iron Hand press unloaders allows transfer of this safety device from one press to another in matter of minutes. This facilitates keeping unloaders in service while presses are down for repairs or die changeover. Complete Iron Hand assemblies are supplied with specially shaped side plates which hook on to cross bars of bracket permanently attached to top of press. Mounting is fastened and locked at one point only. Holes in side plates allow lifting and transfer of unloader by crane. Made by **Sahlin Engineering Co.**, 267 Ferndale St., Birmingham, Mich.

▲ For more details circle **NED-2466** on enclosed inquiry slip ▲

STEAM GENERATOR HOUSING allows unit installation outdoors



Special housing unofficially tagged the "dog house" covers vital working parts of line of steam generators designed for outdoor installation. While providing required protection, housing leaves all working parts readily accessible. Safety features include power lockouts to prevent operation with doors closed when engineer is inside the enclosure. Construction is simple, watertight and effective. Built by **Superior Combustion Industries, Inc.**, Times Bldg., Times Sq., New York 18, N. Y.

▲ For more details circle **NED-2467** on enclosed inquiry slip ▲

When You Buy a BURGESS-MANNING Acousti-Booth

You Buy a 50%* Reduction in Noise

When you invest in a Burgess-Manning Acousti-Booth you are purchasing better communications for your office or plant. Good hearing means fewer errors . . . more work accomplished.

Burgess-Manning booths are pleasing in appearance . . . easy to clean and maintain.

Model 601 Wall Booth of wood construction.

Write for Bulletin 103A

Model 210 Floor Booth of wood construction.

** Results of studies by a prominent research organization.*

BURGESS-MANNING COMPANY
Architectural Products Division
5970-C Northwest Highway, Chicago 31, Illinois

▲ For more details circle **NED-2468** on enclosed inquiry slip ▲

NOW... You can Choose The RIGHT Masonry Drill Bit for EACH Job

By using this handy Guide

NEW—FREE

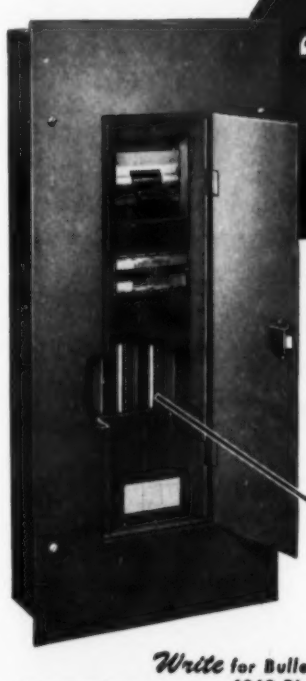
Send for your copy

Easy to use. Practical. Locate material you want to drill and hole size. There you will find bit recommended. Our complete line of masonry drill bits (Cyclo-twist, Cyclo-Core and Thunderbolt) will drill ANY size hole in ANY masonry material.

***New England Carbide* TOOL CO., INC.**
60 BROOKLINE STREET, CAMBRIDGE 39, MASS.

▲ For more details circle **NED-2469** on enclosed inquiry slip ▲

New "PLUG-IN" MULTI-BREAKER NMO PANELETTE



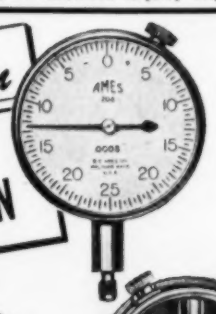
"OFF-THE-SHELF" low cost NMO PANELETTES meet most A. C. lighting and appliance branch circuit applications. THERMAL-MAGNETIC circuit breakers provide both SWITCHING and OVERCURRENT PROTECTION. Available with lugs or circuit breaker mains and up to 40 branch circuits. Standardized components stocked by authorized Square D Distributors everywhere.

***Write* for Bulletin 1600, Square D Company, 6060 Rivard Street, Detroit 11, Michigan**

SQUARE D COMPANY
DETROIT • MILWAUKEE • LOS ANGELES

▲ For more details circle **NED-2470** on enclosed inquiry slip ▲

Modern Design SPEEDS PRODUCTION



● Ames micrometer dial indicators are the most modern available today — and naturally so because Ames policy for over 50 years has been continually to improve design, to take advantage of new materials and to utilize the most advanced manufacturing methods. They are a real aid to the quality control engineer who is trying to keep pace with today's high production schedules.

Because Ames Indicators are functionally designed, they have fewer parts than ordinary indicators. Construction is simple with functional parts being larger and more rugged and adequately supported. Operational friction is at a minimum. Thus, Ames Indicators combine extreme sensitivity and accuracy with the ability and endurance *to stay right on the job longer.*

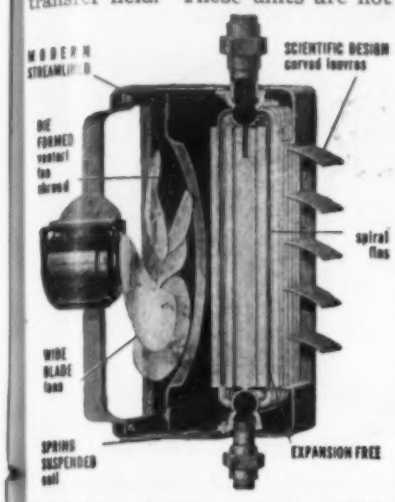
√ *Check this list of features . . .*
1 Forged Solid Brass Case and Stem
2 Heavy Brass Plate
3 Coarse Pitch Stainless Steel Rack
4 Hardened and Burnished Steel Pivots
5 Dials Printed from Steel Engravings
6 Patented Bezel Assembly

Representatives in principal cities **B. C. AMES CO.** *34 Ames Street Waltham 54, Mass.*
Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

▲ For more details circle **NED-2471** on enclosed inquiry slip ▲

UNIT HEATER . . sets new standard of quietness and heating efficiency

McCord Unit Heaters are a time proven product embodying design based on years of experience in the heat transfer field. These units are not only rugged in design and guaranteed for use on #150 p.s.i. steam pressure but are made attractive in appearance. Two outstanding features appeal to maintenance engineers—we use standard motors with standard bases which quickly permits the use of replacement motors should a motor fail in service—the heating element is made of individual spiral fin tubes which are free to expand independently without putting a strain on the brazed joints. The entire heating unit is spring suspended and floats free in the casing, eliminating rigid connections. Improved type fan blades deliver large volumes of air with minimum air noise and vibration which makes these units suitable for office and store use. A complete line of vertical projection type unit heaters and blast coils are also available. Catalog on request or write for folder. "Instructions for Maintenance of Unit Heaters." **McCord Corporation**, Detroit, Mich. *Advt.*



▲ For more details circle **NED-2472** on enclosed inquiry slip ▲

an unbeatable combination

WALES HOLE PUNCHING AND NOTCHING UNITS *and* WALES TWIN COLUMN PRESSES

● A typical example of the unique design built into Wales Twin Column Presses is the double crank pull down drive on the pair of ram guides. This feature provides equal pressure on both ends of ram and assures parallel alignment of ram to press bed.

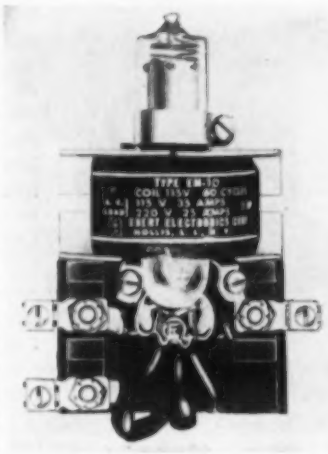
Also this alignment feature works hand-in-hand with the exclusive, independent, self-contained Wales Hole Punching and Notching Units with built-in punches and dies which are held in perfect alignment by holders. In addition, Wales Units do *not* require die sets as nothing is attached to press ram.

Have the complete story *of this unbeatable combination* at your fingertips by writing for fully-illustrated, functionally-colored catalogs TODAY.

WALES-STRIPPIT CORPORATION
GEORGE F. WALES, *Chairman*
363 PAYNE AVE., NORTH TONAWANDA, N. Y.
(Between Buffalo and Niagara Falls)
WALES-STRIPPIT OF CANADA LTD., HAMILTON, ONTARIO
Specialists in Punching and Notching Equipment

▲ For more details circle **NED-2473** on enclosed inquiry slip ▲

THREE-WIRE RELAY sealed for all operating conditions

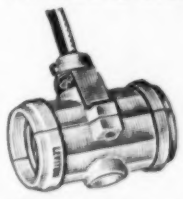


Applicable to lock-up relay service, off-on pushbutton control and other uses, model EM-10 mercury plunger relay is designed for three-wire application. When contact is made, input line connects to two isolated circuits. Tungsten contacts are hermetically sealed in vacuum or hydrogen filled glass tubes for safe operation under all operating conditions. Loads up to 35 amp at 115 v ac or 25 amp at 220 v dc can be handled. Made by **Ebert Electronics Co.**, 185-11 Jamaica Ave., Hollis 7, L. I., N. Y.

▲ For more details circle **NED-2474** on enclosed inquiry slip ▲

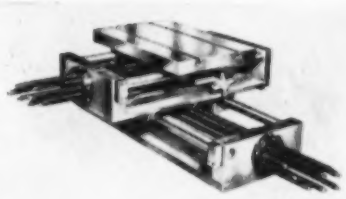
TWIN SOCKET has provisions for various mountings

Measuring only 6 in. across when fitted with two 60 w lamps, No. 4015 plastic keyless twin socket is made with double brackets for special needs. It is furnished with ⅛, ½, and ⅜-in. IPS male or ⅛-in. female bushings. Standard leads are of No. 18 C. F. wire, 9 in. long. Socket is made of brown or black Bakelite and white thermosetting plastic. It is rated at 660 w, 250 v and has Underwriters' Laboratories standard listing. Made by **Leviton Mfg. Co.**, 236 Greenpoint Ave., Brooklyn 22, N. Y.



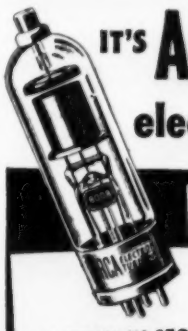
▲ For more details circle **NED-2475** on enclosed inquiry slip ▲

LOCATING DEVICE for parts drilling, boring, milling



Jig boring or milling, without jigs or fixtures, is facilitated with Speedi-Spacer multiposition locating device. Not permanently affixed to any machine, accessory converts any good upright or radial drill with accurate spindle to jig boring tool. Positioning is by nine longitudinal and nine transverse stop screws. Longitudinal and traverse movements are determined by various screw settings; table position is maintained by positive locks. Base plate has ample space for mounting screw holes to fit any machine tool. Working surfaces have two standard ⅜-in. T-slots. Drilling thrust and weight of parts are carried on end-grain Formica bearing blocks riding on ground steel ways. Movable from machine to machine, accessory requires no auxiliary equipment except standard shop micrometers or vernier calipers. Made by **Queen City Machine Tool Co.**, 217 E. Second St., Cincinnati 2, O.

▲ For more details circle **NED-2476** on enclosed inquiry slip ▲



IT'S ALLIED FOR RCA electron tubes for industry

Quick, Expert Service on all RCA special-purpose industrial tubes

ALLIED maintains in stock *for quick shipment*, the world's largest distributor inventory of RCA special-purpose tubes—*of all types*. We specialize in supplying the needs of industrial, broadcast, governmental and other users. To save time, effort and money—phone, wire or write to ALLIED for *quick* shipment. Fill *all* your needs from the *complete, dependable* electronic supply source.

ALL TYPES IN STOCK
- Vacuum Power
- Thyratrons
- Vacuum & Gas Rectifiers
- Ignitrons
- Cold-Cathode
- Phototubes
- Oscillograph Tubes
- Camera Tubes
- Monoscopes
- Special Types

FREE Interchangeability Directory Valuable guide to selection of proper RCA tube type replacements. Lists 1600 tube types. Write for Free RCA Guide No. 37-046.

see your 1952 ALLIED catalog
Refer to your ALLIED Catalog for *all* electronic supplies—parts, tubes, test instruments, tools, audio amplifiers, accessories—available from the world's largest stocks. Write today for your FREE copy of the *complete* 212-page 1952 ALLIED Catalog.

ALLIED RADIO
833 W. Jackson Blvd., Dept. 37-C-2
Chicago 7, Ill.

Everything in Electronics from ONE Source

▲ For more details circle **NED-2477** on enclosed inquiry slip ▲

When heavy, unwieldy weldments like these diesel crank cases can be quickly swung into any position so that every weld is made downhand—that's efficient welding.

Welders spend more time welding—do better welding at lower cost when they work with C-F Positioners because these hand and/or power operated machines reduce positioning time to a minimum. Investigate the cost saving advantages of C-F Positioners. They pay their way in any company.

Write for Bulletin WP 24—an illustrated circular detailing the Specific Advantages of C-F Positioners.

CULLEN-FRIESTEDT CO.
1304 S. Kilbourn Chicago 23, Ill.

▲ For more details circle **NED-2478** on enclosed inquiry slip ▲

Globe Loading Lift

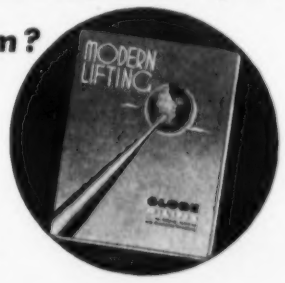
Speeds Loading and Unloading

Trucks, trailers, railway cars, and cargo planes can be loaded faster and at lower cost with a Globe Loading Lift. What's more, material can be handled with less risk of damage to cargo or injury to workers.

The Globe Loading Lift is a simple elevating platform that eliminates the need for ramps, gangplanks, and "muscling" of cargoes. Platform recesses into floor or driveway in "down" position. Accurate control makes for easy, flush-leveling to keep goods moving on an even plane.

Got a Lifting Problem?

GLOBE
has the answer



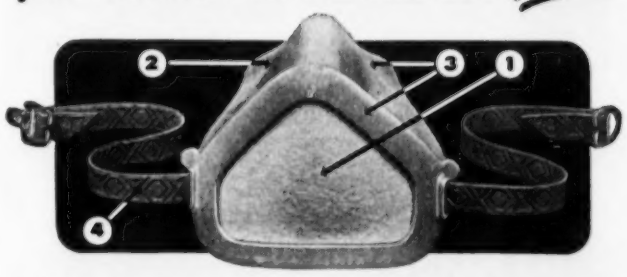
Muscle is the world's most wasteful lifting power. A Globe OiLIFT will do it cheaper and better.

For helpful information on Self-Leveling Ramps, Machine Loading Lifts, Industrial Truck Service Lifts, Production Lifts, etc., write for bulletin NE-312.

GLOBE HOIST COMPANY • 1000 E. Mermaid Lane, Philadelphia 18, Pa.
(Factories at Des Moines, Iowa & Philadelphia, Pa.)

▲ For more details circle **NED-2479** on enclosed inquiry slip ▲

4 Reasons why FLEX-A-FOAM (and *only* FLEX-A-FOAM) provides Dust Protection your workers will welcome and *Wear*



1. Pure latex washable filter purifies the air of non-toxic nuisance dusts as small as 1/25000 of an inch — yet it's easier to breathe and talk through than an ordinary pocket handkerchief! Out-wears throw-away type filter as much as 100 to 1.

2. Perfectly contoured for self-adjusting fit to every size and shape of face—designed for wear with spectacles or goggles with perfect comfort.

3. Positive-locking frames of polyethelene plastic, so flexible and tough they're unbreakable in normal usage. Complete mask weighs only 1 ounce. Attractively styled to suit the most discriminating wearer.

4. Deflance non-skid, natural rubber head-band with adjustable hook-and-eye fasteners holds mask firm and comfortably snug without tension or hair-pulling.

FLEX-A-FOAM FILTER MASK

Sample $1.40 postpaid
★
Write for new descriptive folder

THE GOGGLE PARTS COMPANY • CLEVELAND 13, OHIO

▲ For more details circle **NED-2480** on enclosed inquiry slip ▲

CUT COSTS . . . FASTEN "ON THE DOUBLE" with the Chicago "214" DOUBLE RIVET SETTER

The "214" automatically feeds, inserts and clinches two rivets at a time...with speed that may mean a big saving in your fastening costs.

14" throat makes large assemblies easy to handle. For tubular rivets as large as 5/64", or less in length. Quick Change Rotary Type Hoppers and Raceways permit a 5-minute changeover to rivets of different size. Adjustable anvils and riveting centers add to its versatility.

Ask us how the "214" can help you cut costs. Send a sample of your problem assembly (or blueprint) for a Free fastening analysis.

FREE CATALOG contains valuable engineering information and rivet specifications plus illustrated descriptions of 26 Chicago Automatic Rivet Setters.

Chicago Rivet & MACHINE CO.
9606 West Jackson Boulevard, Bellwood (Chicago Suburb) Illinois
Branch Factory: Tyrone, Pa.

For more details circle NED-2481 on enclosed inquiry slip

FULLER FLOOR BRUSHES CUT COSTS BY CUTTING STROKES

With labor costs running as high as $1.25 an hour for maintenance men, the cleaning tools you put in their hands become mighty important. Supply them with Fuller Floor Brushes and cut your maintenance costs. Let one stroke do the work that formerly required two or three. With Fuller Floor Brushes you get a clean sweep with every stroke, no backtracking. For specifications write to . . .

SHIPPED FROM NINE DISTRIBUTION POINTS

INDUSTRIAL DIVISION FULLER BRUSH

At home... in business, too

3530 MAIN STREET
HARTFORD 2, CONN.
IN CANADA: FULLER BRUSH CO., LTD., HAMILTON, ONT.

For more details circle NED-2482 on enclosed inquiry slip

ONE OF AMERICA'S BROADEST LINES OF HORIZONTAL ALL-PURPOSE PUMPS

ILLUSTRATED 2, 3, 5 HP ELECTRIC DRIVE

PEERLESS TYPE PE & TYPE PB PUMPS

PEERLESS PUMPS

OTHER PEERLESS TYPES:

Fractional hp close-coupled

Integral hp flexible-coupled or V-belt drive

Close-coupled & flexible-coupled pumps 1/4 to 150 hp—up to 5500 gpm

Write today for Peerless Bulletin No. B-2300. Illustrated with views of all pumps in the Peerless Fluidyne line. Includes sectional drawings, elevations, dimensional data and head-capacity characteristics. You can buy and apply right from this bulletin.

PEERLESS PUMP DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION

Los Angeles 31, California and Indianapolis 8, Indiana
Offices: New York, Chicago, St. Louis, Atlanta; Dallas, Plainview and Lubbock, Texas; Fresno, Los Angeles; Phoenix; Albuquerque, N. M.; Tulsa

For more details circle NED-2483 on enclosed inquiry slip

PORTABLE ELECTRIC DEHUMIDIFIER serves up to 10,000 cu ft of space

Rust, mildew, warping, damp rot and excessive dampness can be prevented with model 750 portable electric dehumidifier. Powered by 1/6-hp 115-v ac motor, condenser has ample capacity to dehumidify up to 10,000 cu ft of space, and will remove 2 to 3 gallons of moisture from the air in 24 hours. Machine measures only 17 x 12 x 18 in. and has removable In-A-Drawer to hold water removed from air. Unit can be operated over a drain with drawer removed. Made by **Fresh'nd-Aire Co.**, Dept. NED, 221 N. LaSalle St., Chicago 1, Ill.

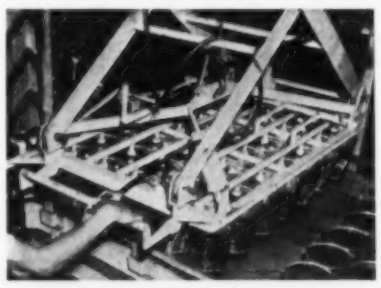
For more details circle NED-2484 on enclosed inquiry slip

STEEL CLAMPS for light and heavy wall conduit

Fabricated of ductile malleable steel, line of Hercules clamps for mounting light and heavy wall conduit is designed with one slip hole which takes up to 1/4-in. diameter screws. High double ridges give strength to zinc plated clamps. Size is stamped on each unit. Made by **Victor Specialties**, 773 Main St., New Rochelle, N. Y.

For more details circle NED-2485 on enclosed inquiry slip

PALLETIZING SYSTEM also removes cans from pallets



Palletizing speeds as high as 300 "bright" cans per minute and depalletizing speeds of 1000 cans per minute are realized by system comprised of two basic units, one for each operation. Both units can be integrated with processing and packaging line. As cans leave processing line, palletizer arranges them into load pattern determined by size of can and pallet. Suction head moves over load, picks it up and swings it laterally over pallet, then deposits full tier. Sheet of kraft paper placed on top of each tier binds tiers together. Only can and pallet size dictate number of tiers. Depalletizer, also equipped with suction head, can be arranged to remove full tier of cans for placement on moving belt conveyor, as shown in photograph. Made by **Emhart Mfg. Co.**, Standard-Knapp Div., Dept. N, Portland, Conn.

For more details circle NED-2486 on enclosed inquiry slip

HORIZONTAL POWER . . .

. . . where Belt Surface Conveyors can't stand abuse of heavy metals, sharp corners or rough edges, Metzgar "Live Roller" units provide an all-metal, powered bearing surface. May be used as power booster in gravity line. Work can be slowed or held without stopping machine.

4 STOCK SIZES
11½" - 15"
18" - 24"
WIDTHS

Furnished portable or permanent mounted. Choice of one to five rollers per foot. Lengths to suit. Ball bearing throughout. Gearmotor AC or DC drive.

ASK FOR FOLDER NO. 1249

METZGAR CO.
MFGRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES • REEL DOLLIES & END-WOOD WHEELS.
416 Douglas N.W.
GRAND RAPIDS 4, MICH.

For more details circle NED-2487 on enclosed inquiry slip

It's Easy...with WITTEK Roll Feeds and Reel Stands

Wittek Roll Feeds handle any type of coiled strip stock and are made in single roll, double roll, and compound types with straighteners, in models to feed in any of four directions. They are reliable and accurate with simple, quick adjustment of feed length. Standard sizes and models meet a wide variety of press size and capacity conditions.

Wittek Reel Stands facilitate handling coiled stock.

Write for full particulars

WITTEK Manufacturing Co.
Automatic ROLL FEEDS AND REEL STANDS
4325 W. 24th Place, Chicago 23, Illinois

For more details circle NED-2488 on enclosed inquiry slip

CALCULAGRAPH

figures elapsed time accurately

Reliable job time records are essential for compiling correct cost data, estimating reorders and checking on production efficiency. One sure way to secure accurate to the minute, dependable time costs is to use Calculagraph automatically-figured elapsed time records. Calculagraph gives you total elapsed time, starting and finishing time and date on a permanent, printed reference card. Eliminate losses due to inaccurate job time calculations by using Calculagraph to time your operations.

Write for full information today, to Dept. A.

CALCULAGRAPH COMPANY
SUSSEX STREET, HARRISON, NEW JERSEY

For more details circle NED-2489 on enclosed inquiry slip

BLOW for BLOW

YOU CAN'T BEAT SPO AIR VIBRATORS

Powerful hammer-like blows delivered by SPO air vibrators assure steady jam-free flow of granular or powdered materials. These dependable, low-cost units prevent clogging and packing in bins, hoppers and chutes.

All SPO vibrators incorporate a special corrosion-proof bronze alloy cylinder liner that provides full-power starting, high-speed operation, thorough lubrication and maximum service life.

SPO offers a complete range of types and sizes to meet every vibration requirement.

Write today for Bulletin 50 for complete details.

SPO INCORPORATED

6475 Grand Division Ave. • Cleveland 25, Ohio

For more details circle NED-2490 on enclosed inquiry slip

★ POWER RELAYS
★ SMALL RELAYS
★ SENSITIVE RELAYS
★ LATCH RELAYS
★ INSTRUMENT-CONTROLLED RELAYS and SETS
★ SEQUENCE RELAYS
★ TIMING UNITS
★ SPECIAL-PURPOSE RELAYS

5,348 RELAY TYPES

...mean that you get exactly the right relay for the job!

STRUTHERS-DUNN

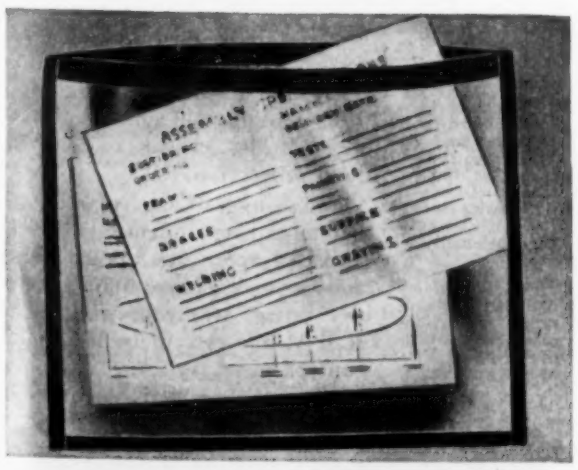
Struthers-Dunn, Inc., 150 N. 13th St., Phila. 7, Pa.

BALTIMORE • BOSTON • BUFFALO • CHARLOTTE • CHICAGO • CINCINNATI
CLEVELAND • DALLAS • DETROIT • KANSAS CITY • LOS ANGELES
MINNEAPOLIS • MONTREAL • NEW ORLEANS • NEW YORK • PITTSBURGH
ST. LOUIS • SAN FRANCISCO • SEATTLE • SYRACUSE • TORONTO

For more details circle NED-2491 on enclosed inquiry slip

WANTED!

1000 PLANT EXECUTIVES



TO TEST THIS PLASTIC ENVELOPE FREE Worth 26c

Test this FREE Job Ticket Envelope in your plant. See how production records, job orders, charts, etc. stay crisp and clean despite constant handling. Now, you can eliminate doubts, errors and wasted time due to blurred, grease-stained figures. Send for circular #B-2, which illustrates the many practical uses for these rugged envelopes . . . not only on the production end, but in the office as well.

AMERICAN KLEER-VU PLASTICS, INC.

57 Thames St. Brooklyn 37, N. Y.

For more details circle NED-2492 on enclosed inquiry slip

PARTS COUNTING MACHINE aids packaging of any product

Any desired quantity of parts or objects is counted accurately and automatically at rates up to 250,000 per hour with this Count - O - Matic E machine. Counted batches of products are fed into alternate receptacles for packaging or boxing. Machine can be set up to handle different size or shape of product in 5 to 10 minutes. Turn of dial on electronic control selects the quantity to be counted. Model illustrated is used to package roofing nails. Made by **U. S. Engineering Co.**, 40-22 22nd St., Long Island City 1, N. Y.

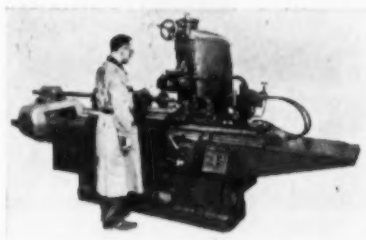
For more details circle NED-2493 on enclosed inquiry slip

LIGHT BULB COATING prevents scattering of broken glass

Danger of injury to employees from glass particles of broken light bulbs can be eliminated by use of Tecogel clear, lacquer type antifragmentation coating. Applied by hot dipping, material sets in 2 to 3 minutes and dries hard in 2 to 3 hours. Coated bulbs should be allowed to dry for 4 or 5 hours before use. Made by **Thompson & Co.**, 1085 Thompson Ave., Oakmont, Pa.

For more details circle NED-2494 on enclosed inquiry slip

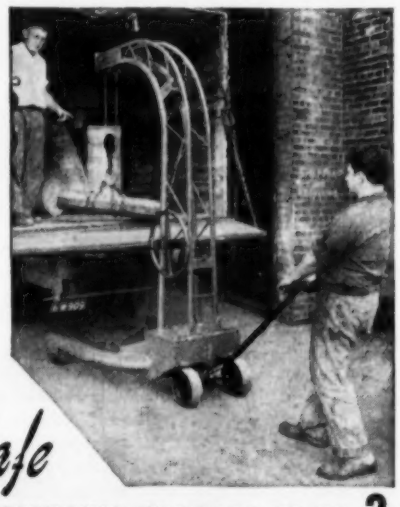
HELICAL GEAR GRINDER work couples to and indexes with reciprocating lead bar



Designed primarily for high precision form grinding of helical gears, model SGF Red Ring gear grinder can also be used for spur gears and splines. True helix angle or lead is maintained through master lead bar, operating through pressure lubricated self-tightening antibacklash saddle nut. Work drive head stock is coupled through index plate to one end of bar, and as lead bar reciprocates, work rotates with it.

Column, mounted on machine base, is located by two circular slots to position wheel plane for desired helix angle of work. It is moved to desired radial position by graduated scale and semicircular chain rack and pinion, controlled by hand crank. Mechanical indexing is actuated by motion of lead bar. For spur gears, indexing can be done manually. Housing carrying grinding wheel spindle is moved vertically by elevating screw operated by column hand wheel. Grinders are equipped with precision wheel dressers for any tooth form desired. Made by **National Broach & Machine Co.**, 5603 St. Jean Ave., Detroit 13, Mich.

For more details circle NED-2495 on enclosed inquiry slip



Safe

EASY HANDLING OF LOADS UP TO 3 TONS!

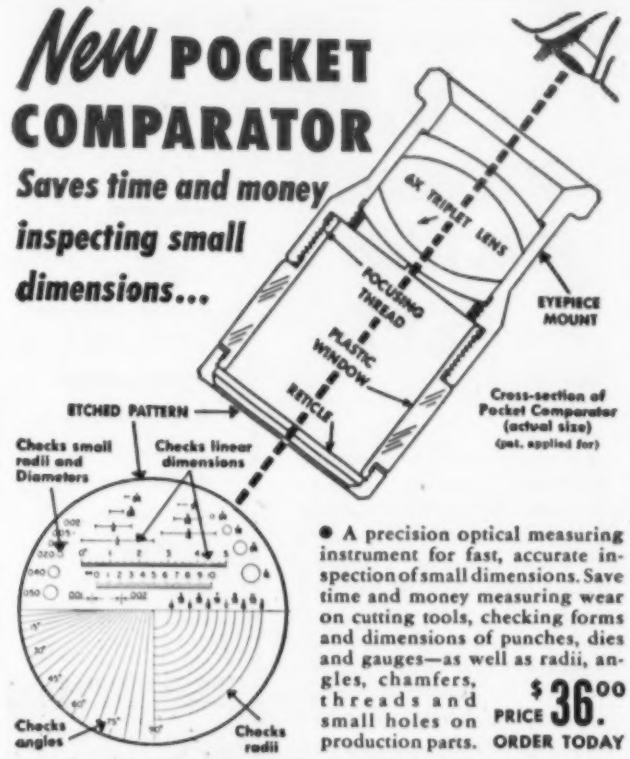
Unloading covered trucks, like other tough jobs, is no problem for one man with a "CANTON" Portable Floor Crane. This lightweight, tubular welded steel crane is made in 8 sizes ranging from one to three ton capacity. Bulletin N-52 tells the story.

The HILL ACME CO.
"CANTON" DIVISION 1201 W. 65TH ST., CLEVELAND 2, OHIO

For more details circle NED-2496 on enclosed inquiry slip

New POCKET COMPARATOR

Saves time and money inspecting small dimensions...



• A precision optical measuring instrument for fast, accurate inspection of small dimensions. Save time and money measuring wear on cutting tools, checking forms and dimensions of punches, dies and gauges—as well as radii, angles, chamfers, threads and small holes on production parts.

PRICE $36.00 ORDER TODAY

a product of BELL & HOWELL CO. distributed by

Write for FREE descriptive folder

See Your National Tool Co. Representative or Local Jobber

NATIONAL TOOL CO.

11210 Madison Avenue Cleveland 2, Ohio

For more details circle NED-2497 on enclosed inquiry slip

you GO with OHIO GREEN

WORLD'S FINEST SLITTER KNIVES AND SHEAR BLADES made in OK Battle Axe, OK Dura Chrome and OK Standard.

The cutters shown are used on gang slitters — side trimmers and for tin plate. They are held to ± .00025 tolerances and are given an extremely high finish. Closer tolerances can be furnished on request.

We also furnish hardened and unhardened spacers with the same close tolerances and high finish as the slitters.

The large shear blade shown is furnished in the above three grades for shearing any type of metal and are made to fit any machine. Send us your inquiries giving quantities and sizes.

OK ROTARY SHEARS-BLADES are designed to give maximum service — tough as they come!

OHIO KNIFE Co. CINCINNATI 23, OHIO

WORLD'S LARGEST EXCLUSIVE MANUFACTURERS OF KNIVES

For more details circle NED-2498 on enclosed inquiry slip

16 MECHANICAL FUNCTIONS OF FELT

- SEALING
- WICKING
- WIPING
- POLISHING
- VIBRATION CONTROL
- FILTRATION
- SOUND ABSORPTION
- THERMAL INSULATION
- SHOCK ABSORPTION
- CUSHIONING
- MOISTENING
- PADDING
- PACKAGING
- SURFACING
- FRICTIONAL
- PERCUSSION

These are but a few of the important mechanical functions fulfilled by Felt. Advanced fibre technology and research in American Felt Company Laboratories has led to many new applications where special properties and accurate specification control were needed. An experienced engineering and development staff is ready to assist you by furnishing full technical data or by selecting or designing felt parts for your own special use. Write for "The Story of Felt."

American Felt Company

62 GLENVILLE ROAD, GLENVILLE, CONN.

For more details circle NED-2499 on enclosed inquiry slip

WE'LL SEND YOU THIS WHOLESALE CATALOG FREE!

60% SAVINGS ON SOME ITEMS

OVER 9,000 ITEMS including

ELECTRIC MOTOR PARTS
REFRIGERANTS & FITTINGS
DEEP FREEZER SUPPLIES
DEHYDRATORS
COPPER TUBING
VALVES
CONTROLS
HIGH SIDES
GAUGES
TOOLS

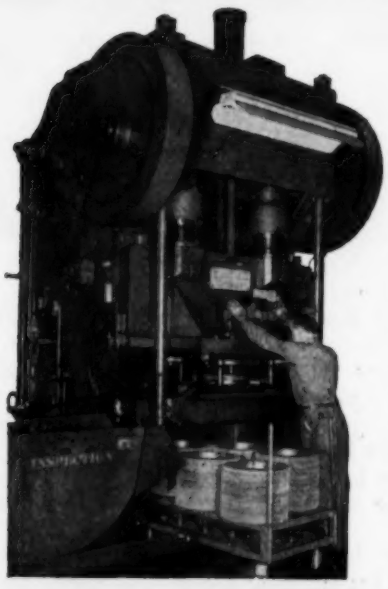
Wide Range FLARING Tool

Flares 9 different sizes. One bar flares 1/8", 3/16", 1/4", 5/16", 3/8" and 7/16" OD sizes and the second bar flares 1/2", 5/8" and 3/4". Yoke has "slip on" feature with the inside edges notched to hold in place. Self centering No. 135648. Complete Wide Range Flaring Tool for 9 different sizes, in metal case.

WRITE TODAY TO

THE HARRY ALTER CO.
1726 S. MICHIGAN AVE., CHICAGO 16
132 LAFAYETTE ST., NEW YORK 13

For more details circle NED-2500 on enclosed inquiry slip



Clutch plates of sizes 11¾" to 22¾" O.D. are made with this 300 ton Steelweld Press.

2000 CLUTCH PLATES PUNCHED PER SHIFT

Many unusual jobs far afield from bending can be done economically on Steelweld Presses built with simple variations to suit requirements. The machine illustrated provides a low-cost method of punching clutch plates of 11 to 13 gauge metal.

Send for free copy of catalog No. 2011

STEELWELD BENDING PRESSES CATALOG No. 2010

THE CLEVELAND CRANE & ENGINEERING CO.
6637 East 281st St. Wickliffe, Ohio

STEELWELD PRESSES

For more details circle NED-2501 on enclosed inquiry slip

TOROIDAL OUTPUT TRANSFORMER is bolt mounted above or below shelf

In addition to its use in audio amplifiers, type 942-A output transformer is adaptable to high-power modulators, amplifiers for electronic musical instruments, industrial uses and constant-voltage audio distribution systems. Eighteen impedance ratios can be obtained covering wide range of values, and primary windings can be separated as required in certain single-ended push-pull amplifier circuits. Low leakage reactance between primary sections gives minimum distortion from switching transients in push-pull circuits.

Continuous power rating is 90 w while peak powers of over 100 w can be handled. Distortion is 1 per cent or less above 30 cycles under normal operation, and upper frequency limit is between 50 and 100 kc, depending upon connections used. Unit weighs 7 lb and measures 3¾ x 5½-in. diameter. Made by **General Radio Co.**, Massachusetts Ave. & Front St., Cambridge 39, Mass.

For more details circle NED-2502 on enclosed inquiry slip

WELDING POSITIONERS 1000 and 2500-lb capacity models have 10 to 1 variable speed range

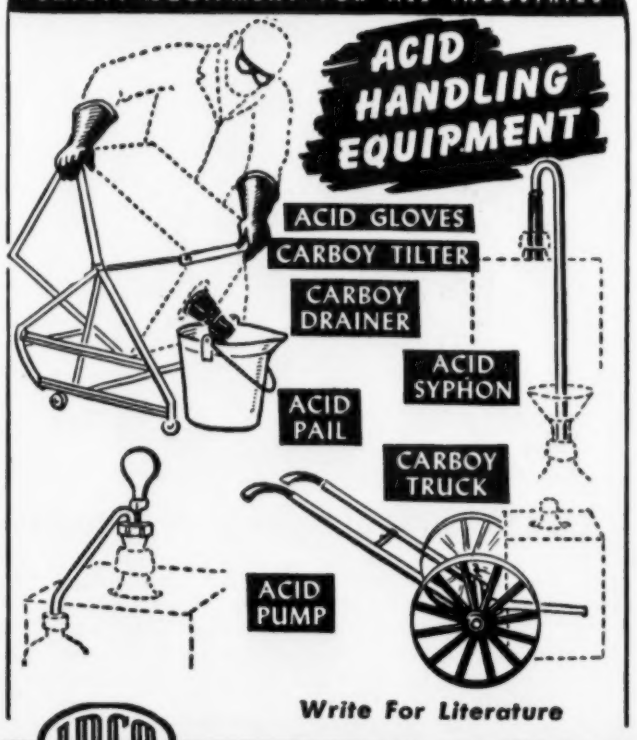
Rotation speed can be varied through 10 to 1 speed range by handwheel adjustment on model P-10 R 1000-lb capacity and model P-25R 2500-lb capacity medium duty welding positioners. Both models are available with hand or power tilting of table through a 135-degree angle, exact angle being shown on tilt indicator. Design features compact three-in-one table tilting frame. Standard electrical control is forward-stop-reverse manual across-the-line starter on 10-ft cable. Reeves Motodrive power unit is equipped with 220/440 v, three-phase, 60 cycle ac squirrel-cage induction motor and integral variable speed transmission with totally enclosed worm gear reducer.

Hand tilt system uses totally enclosed, self-locking worm gear reducer. Optional power tilting table includes reversing drum control and magnetic brake. Other optional features include reversing foot control for table rotation, reversing magnetic starter for table rotation, reversing magnetic starter and limit switches for power tilt system, free-wheeling clutch for table rotation and rotating ground clamp. Made by **Reed Engineering Co.**, Dept. NED, P. O. Box 415, Carthage, Mo.

For more details circle NED-2503 on enclosed inquiry slip

SAFETY EQUIPMENT FOR ALL INDUSTRIES

ACID HANDLING EQUIPMENT



Write For Literature

IPCO Safety Equipment for all Industries

INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET · PHILADELPHIA 33, PA.

For more details circle NED-2504 on enclosed inquiry slip

NEW! HANDLE WITH EASE

ISLAND PALLET DOLLIES cut Loading Time in half

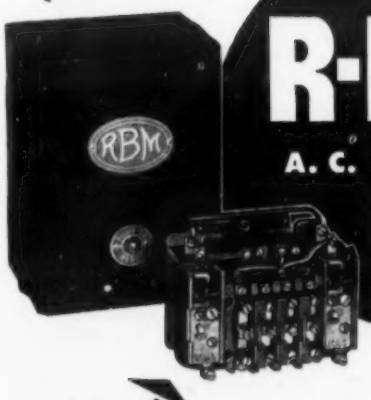
TAKE over where fork trucks leave off . . . at the Truck or freightcar door. Island Pallet Dollies have staggered bottom rollers to eliminate trouble from floor racks. Built to handle *your* pallets. All parts are standard equipment. Write for Bulletin RTD-1A. Dept. NE3

ISLAND EQUIPMENT CORP.
27-01 Bridge Plaza North
Long Island City 1, N. Y.

For more details circle NED-2505 on enclosed inquiry slip

NEW!

R-B-M A. C. MAGNETIC STARTERS *Line Voltage Type*



With Visible Contact Overload Relays

R-B-M Size 0 and 1 A.C. Magnetic Starters have identical overall panel mounting dimensions. All parts, except stationary and movable contact assemblies, are common to both sizes.

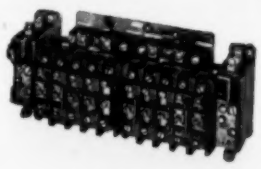
Ilsco solderless lugs, suitable for #6 maximum wire size, are standard. Screw terminals are available on special order. Magnet coil can be removed without disassembling starter. Stationary and movable contacts replaceable without disconnecting wiring. Enclosed heater element, expanding U-shaped bi-metal and snap action contact mechanism provide dependable, accurate motor overload protection.

Small overall size, plus identical mounting dimensions for 10 and 15 ampere 2 to 5 pole contactors, as well as Size 0 and 1 non-reversing starters, make the R-B-M line extremely flexible for control panel layout.

Heater element cannot be assembled to starter incorrectly.

Bi-metallic thermal overload relay assembly replaceable without removing starter from enclosure. Designed for separate mounting without subpanel assembly.

TRIP-FREE Manual reset is standard. Manual-Automatic Reset available on special order at no extra charge.



Two 5 pole contactors mechanically interlocked with overload protection on common base. Unwired. Note interchangeability of 25 ampere normally open contacts and 15 ampere convertible N.O. or N.C. interlocks.

Address Dept. K-3

RBM R-B-M DIVISION ESSEX WIRE CORP. Logansport, Indiana

MANUAL AND MAGNETIC ELECTRIC CONTROLS —FOR AUTOMOTIVE, INDUSTRIAL, COMMUNICATION AND ELECTRONIC USE

For more details circle NED-2506 on enclosed inquiry slip

CHROMALOX gives you the LOW COST answer for

VARIABLE HEAT

NON-BREAKABLE INFRARED

SAFE OPERATION

CHROMALOX ALL-METAL Electric RADIANT HEATERS

The new and improved CHROMALOX heating principle gives ALL infrared heat advantages: high heat intensity, "color blind" infrared radiation, heat that's infinitely variable! You get more satisfactory results at reduced costs in baking, drying, curing, preheating and similar uses with CHROMALOX Radiant Heaters.

Write for FULL DATA

Tell us what you want to do with infrared heat and we'll send you data sheets covering your needs.

18-23

Radiant Heater Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.

See other advertisement on page 4

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-2507 on enclosed inquiry slip

FLOOR MAINTENANCE TIME CUT 65%

with MULTI-CLEAN ASPHALT TILE PRESERVER and THE MULTI-CLEAN METHOD

"We spend 65% less maintenance time on our asphalt tile floors and have cut our material costs in half since using the Multi-Clean Method," says the maintenance director at Seeger Refrigerator Co., St. Paul, Minn.

Multi-Clean Asphalt Tile Preserver and the Multi-Clean Method apply to old and new asphalt tile floors . . . add years to their life, impart a new beauty-clean appearance and sure footing. No wax is required for a bright and gleaming surface.

Maintenance in the Seeger offices includes daily dry dust mopping and damp mopping with cold water followed by machine buffing with a No. 0 steel wool disc every 3 to 4 days. A new application of Multi-Clean Asphalt Tile Preserver is made 4 times a year.

Write Multi-Clean Products, Inc., Dept. NE-3 for details.

Multi-Clean 9-Job Floor Machine

Multi-Clean Wet-Dry Vacuum

MULTI-CLEAN PRODUCTS INC.

2277 Ford Parkway
ST. PAUL 1, MINNESOTA

free! FLOOR MANUALS—Handy file size, each manual deals with a specific type of floor, its characteristics and care . . . asphalt and rubber tile, terrazzo, concrete, wood, linoleum.

For more details circle NED-2508 on enclosed inquiry slip

PRECISION INTERNAL FORMING TO MEET PRODUCTION DEMANDS

QUICK ADJUSTMENT AND POSITIVE ACTION make the MAX-WELL-MADE Model JF recessing tools especially suitable for use in today's high-speed production schedules.

This tool operates on any jig and fixture setup to cut snap ring grooves, "O" ring grooves and oil labyrinths as well as for inaccessible spot facing, external necking, precision undercutting, etc.

Accurate to within ±0.001-inch, Model JF is available in five sizes to pilot into standard bushings from 1" to 2¼ inches.

JF tools can be supplied with either standard Morse or adjustable adapter, quick-change, straight or special shanks.

Write today for catalog. (Model JF)

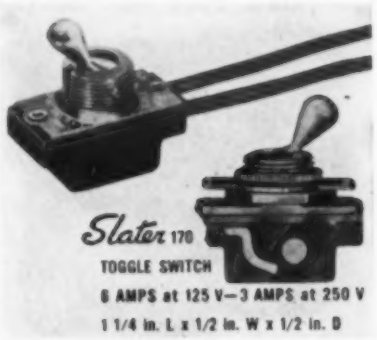
392-MC

THE MAXWELL COMPANY

380 BROADWAY • BEDFORD, OHIO

For more details circle NED-2509 on enclosed inquiry slip

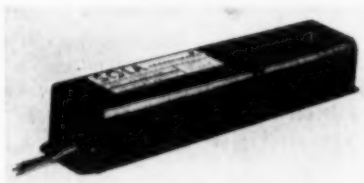
COMPACT TOGGLE SWITCH for electric tools and appliances



Available with wire leads, solder lugs or screw terminals, model 170 switch can be made up as a single-pole, single throw toggle or momentary switch according to requirements. It is rated 6 amp at 125 v, or 3 amp at 250 v. Compact switch measures only 1¼ in. long by ½ in. wide and deep, and is available with mounting sleeves of variable lengths from ¼ to 15/16 in. Handle may be had in variety of lengths in either ball or bat types. Basic design of switch makes it practical for use in fans, small heaters, hair dryers, mixers, saws, drills, vacuum cleaners, test equipment and similar applications. Made by **Slater Electric & Mfg. Co.,** Dept. T, 56th St. & 37th Ave., Woodside, N. Y.

For more details circle NED-2510 on enclosed inquiry slip

FLUORESCENT LAMP BALLAST is improved series-sequence type



Redesigned to meet Certified Ballasts Manufacturers' Supplement No. 1 to American Standards Specification C82.1, Sequenstart fluorescent ballast for 2-96T12 fluorescent lamps is series-sequence type. Ballast affords increased lamp starting current to assure full rated lamp life, is identical in size and is interchangeable with older type. Cataloged under 608-408, ballast retains all advantages of conventional lag-lead ballasts. Ventilated capacitor compartment is also retained to insure cool, quiet operation. Case has durable black wrinkle finish. Made by **Sola Electric Co.,** Dept. P-51, 4633 W. Sixteenth St., Chicago 50, Ill.

For more details circle NED-2511 on enclosed inquiry slip

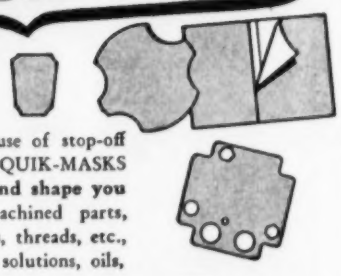
AROMATIC HYDROCARBON DETECTOR protects workers exposed to hazards

Accurate check to determine if concentrations of aromatic hydrocarbons such as benzene, toluene and xylene have exceeded safe limit for workers exposed to these hazards is provided by bulb-actuated detector. Cylindrical scale is graduated for each hydrocarbon. Unit is supplied in kit which contains color scale, tube rack, mixing bottle, rubber tube caps and leather case with shoulder strap. Made by **Mine Safety Appliances Co.,** 220 N. Braddock Ave., Pittsburgh 8, Pa.

For more details circle NED-2512 on enclosed inquiry slip

NEW MASKING METHOD for SPRAY PAINTING • PLATING • SAND BLASTING

PRE-CUT SELF-STICKING QUIK-MASKS



Hundreds of plants now using Brady QUIK-MASKS are saving time and money **by completely eliminating** costly hand work, use of stop-off materials and metal shields. QUIK-MASKS are **pre-cut to the exact size and shape you need.** Protect name plates, machined parts, plated and polished sections, holes, threads, etc., from paint, plating and cleaning solutions, oils, acids and sand blasting.

QUIK-MASKS are pre-cut from special "SCOTCH" brand plating and masking tapes. They stick without moistening—are quickly applied and removed. Circles, squares, rectangles, hexagons, letters and numerals stocked in many sizes. Nameplates and other specials made to your exact requirements.

FREE SAMPLES

DISTRIBUTORS IN OVER 125 PRINCIPAL CITIES

MANUFACTURERS OF SELF-STICKING PRODUCTS

W. H. BRADY COMPANY

1641 E. SPRING STREET • CHIPPEWA FALLS, WIS.

For more details circle NED-2513 on enclosed inquiry slip

there's a way around this IRON CURTAIN

Don't put up with business blockades caused by overloaded or obsolete internal communications. AMPLICALL Electronic Intercommunication takes down the "Iron Curtains" in *your* business—provides *2-second speech contact* within and between departments—leaves switchboards clear for important outside calls—keeps personnel *on the job*—gets business done faster! Today, more than ever, your business needs AMPLICALL—the superior Intercommunication System.

ELECTRONIC AMPLICALL INTERCOMMUNICATION

See Your Phone Book

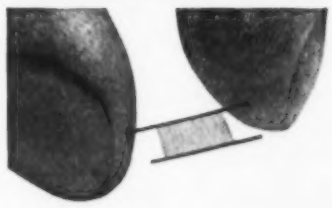
For your nearest AMPLICALL specialist, look under "Intercommunication" in your classified 'phone directory, or write direct.

Electroneering is our business

SOUND EQUIPMENT Rauland INTER-COMMUNICATION

RAULAND-BORG CORPORATION • 3523-D ADDISON ST., CHICAGO 18, ILL.

For more details circle NED-2514 on enclosed inquiry slip



Tight "specs" on small, fragile parts are quickly and completely checked on a KODAK CONTOUR PROJECTOR

Whether you're checking this tiny radio tube grid or a big intricate commutator a foot in diameter, a Kodak Contour Projector keeps on paying its way in your inspection department.

The new Model 2A is seen here being used to measure spot samples of parts far too delicate for any but the optical method of gaging. Newly designed vertical and horizontal measuring attachments let you apply precision micrometry to inaccessible dimensions that would be distorted by mechanical contact.

If you need optical gaging for rapid routine inspection rather than for measurements, the stripped-down Model 3 is your choice. With it, even an inexperienced operator can pass a part or see at once which of many dimensions are off, and by how much.

In your area there's an engineer with wide experience in both aspects of optical gaging technique. It will cost you nothing to discuss with him the details pertinent to your particular requirements. To get in touch with him, write Eastman Kodak Company, Industrial Optical Sales Division, Rochester 4, N. Y.

the KODAK CONTOUR PROJECTOR

If you want to check precision spur and helical gears in action, write for information about Kodak Conju-Gage Instrumentation.

Kodak

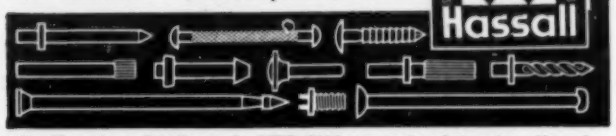
For more details circle NED-2515 on enclosed inquiry slip

WRITE FOR FREE Hassall decimal-equivalent wall chart

In such popular demand (we've given away 50,000) — we've made it better. The new chart is far easier to read! In three colors to automatically signal decimal-equivalents of fractions. The special products which frame the chart are a constant reminder of a good source for cold-headed parts.

ESTABLISHED 1850

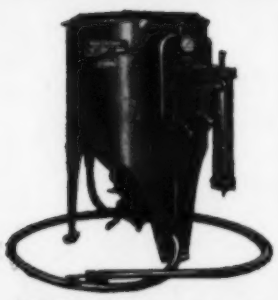
JOHN HASSALL, INC.
398 Oakland St., Brooklyn 22, N. Y.



For more details circle NED-2516 on enclosed inquiry slip

NOW! Pangborn Stock Units for Blast Cleaning... Dust Control... Precision Finishing

Blast Cleaning Unit is PORTABLE!



Ideal for maintenance and many other jobs, including removal of rust, dirt, scale, etc. Economically cleans large objects like tanks, bridges, structural work before painting. Six sizes, stationary or portable, from $170.00 and up.

Hydro-Finish SPEEDS POLISHING!

Removes scale and directional grinding lines . . . prepares surfaces for plating and holds tolerances to .0001"! Liquid blast reduces costly hand cleaning and finishing of molds, dies, tools, etc. Models from $1295.00 and up.

STOP DUST at the SOURCE!

Pangborn industrial type Unit Dust Collectors trap dust at source. Machine wear is minimized, housekeeping and maintenance costs reduced. Solves many grinding and polishing nuisances and material losses. Models from $286.00 up.

COMPACT Blast Cabinet for SMALL WORK!

Ideal for producing clean, smooth surfaces on pieces up to 60" x 36" in size. Cleans metal parts, removes rust, scale, grime, dirt, paint, etc., in a few seconds. Saves money all year 'round. Models from $315.00 and up.

Look to Pangborn for the latest developments in Blast Cleaning and Dust Control Equipment

Pangborn MAIL COUPON FOR DETAILS

Check for more information
- ☐ Blast Cleaning Cabinets
- ☐ Blast Cleaning Machines
- ☐ Unit Dust Collectors
- ☐ Hydro-Finish Cabinets

PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md.
Gentlemen: Please send me more information on the equipment I've checked at the left.
Name.....
Company.....
Address.....
City..... Zone..... State.....

For more details circle NED-2517 on enclosed inquiry slip

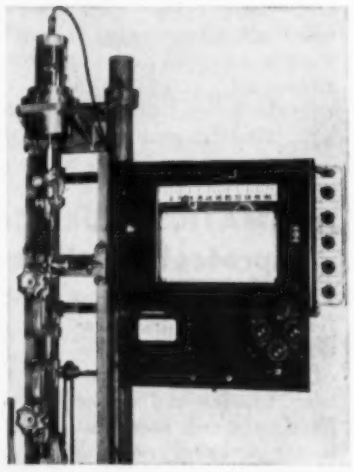
ELECTRON MICROSCOPE has 1000 to 60,000X magnification and uses roll or plate film camera

Accelerating potentials of 40, 60, 80 and 100 kv are available for model EM-100 electron microscope which has continuous screen magnification from 1000 to 60,000X. Instrument is capable of producing micrograms of 30 Angstroms resolution or better. It has beam oscillator for rapid determination of exact focus, eliminating necessity for series of exposures with conjunctive time loss. Unit has large field and permits recording, in single photograph, areas which might otherwise require mosaic of six individual sections.

Roll film camera, using standard 35-mm high contrast film, permits up to 40 exposures per loading and allows grain-free enlargement to 12 x or better. Plate camera is available as optional accessory. Built-in photometer provides standard for proper exposure time. Vacuum system has mechanical pump that need be run for only short time every 3 or 4 hours of operation. Unit requires three-phase, four-wire alternating current of 220/380 v 60 cycles with neutral wire and equipment ground lead. Cooling water of about 60° F is required. Made by **North American Philips Co.**, Research & Control Instruments Div., 750 S. Fulton Ave., Mt. Vernon, N. Y.

For more details circle NED-2518 on enclosed inquiry slip

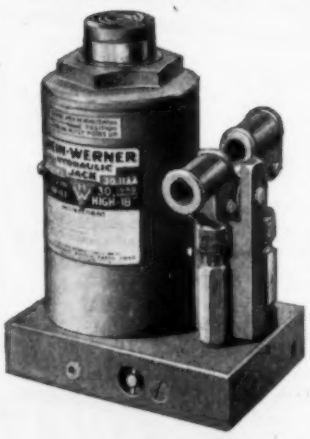
WEIGHING SYSTEM of inertialess electric type



Existing Scott testers of pendulum type can be converted from constant-speed-of-pull operation to constant-rate-of-extension by application of inertialess electric weighing system. Resistance of specimen or load is absorbed by deflection of elastic spool, which is then converted to voltage and measured by a potentiometer with recording chart. On chart, extension of specimen is shown vertically and load horizontally. As chart speed and clamp speed are both time functions, chart becomes stress-strain diagram directly. New system can be installed on model J, L, Q and X-3 Scott testers by nonmechanical personnel. Potentiometer recorder replaces old recorder, with current derived from any 110-120-v outlet. Conversions are available from 2-10 lb to 400-2000 lb. Change from one capacity to another is by changing elastic member. Made by **Scott Testers, Inc.**, 181 Blackstone St., Providence, R. I.

For more details circle NED-2519 on enclosed inquiry slip

it's POWERFUL... it's a HEIN-WERNER!



On small jobs, or big jobs —wherever powerful hydraulic force is needed— you'll find a Hein-Werner Hydraulic Jack will fill the bill.

Every model in this line is powerful . . . dependable . . . versatile . . . A Hein-Werner Jack can be effectively used for lifting, pushing, pulling, bending, straightening, and pressing operations.

Made in models of 3, 5, 8, 12, 20, 30, 50, and 100-tons capacity . . . See your industrial distributor or write us for details.

Hein-Werner HYDRAULIC JACKS

HEIN-WERNER CORPORATION
Waukesha, Wis.

For more details circle NED-2520 on enclosed inquiry slip

MARVEL No. 8, Capacity 18" x 18"

There is no other sawing machine like it. The work remains stationary. The blade is guided with a 90° twist and power fed vertically through the work. The saw blade and column can be instantly swung and clamped at any angle to 45° either right or left from vertical for miter cutting.

The number 8 MARVEL saw will handle the smallest, as well as the largest work up to 18" x 18". It will cut-off, trim, miter, notch, and split all bar stock, pipe, structural sections, moulding, tubing, or irregular shapes.

Write for our catalog, containing valuable information, enabling you to select a metal saw best suited to your work.

MARVEL Metal Cutting SAWS — Better Machines-Better Blades

ARMSTRONG-BLUM MFG. CO.
"The Hack Saw People"
5700 Bloomingdale Ave. Chicago 39, U.S.A.

For more details circle NED-2521 on enclosed inquiry slip

IMMEDIATE DELIVERY!

40 Stock Sizes.
Tuck end tough kraft.
Stocked for immediate shipments.
Sizes range from 1/2 x 1-7/16 inches square to 2 x 7-1/4 inches.
Special cartons, plain or printed, made to your specifications.

•

Tags in all grades and colors to your order, printed, numbered, or plain.

Campbell BOX AND TAG CO.
Main & Equipment St.
South Bend 23, Indiana

For more details circle NED-2522 on enclosed inquiry slip

Reduce the High Costs of *Eye Accidents*

Use WATCHEMOKET eye SAVERS

The success of your safety program depends on workers actually wearing their goggles. All-plastic Eye-Savers can help you get the worker cooperation you need. Their comfortable fit, good looks and great impact resistance make them popular with workers everywhere. Available from your safety supplier in many different models to meet all eye hazards. Model 1N (square shape shown above) features wide angle vision and maximum ventilation.

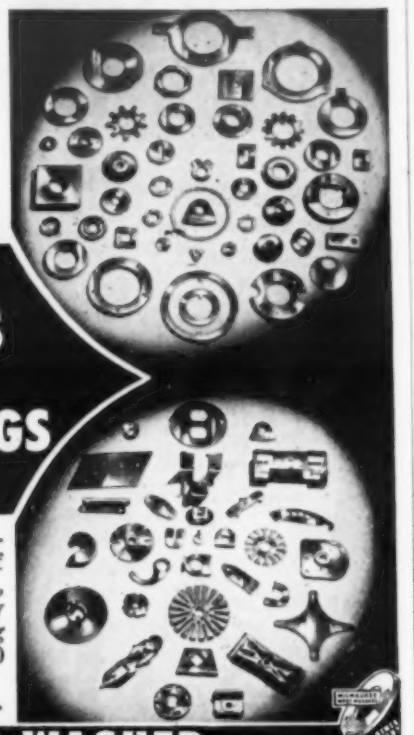
FREE! *Send for magazine article giving impartial advice on best uses of plastic eye protection. Eye-Savers catalog also included.*

WATCHEMOKET OPTICAL CO., INC.
DEPT. 7, PROVIDENCE, RHODE ISLAND
Producers & Originators of Practical Plastic Eye Protection

For more details circle NED-2523 on enclosed inquiry slip

Serving **INDUSTRY**

SINCE **1887**



WASHERS and STAMPINGS

Standard and Special Washers, of every description, any material, any finish, utilizing more than 22,000 Sets of Dies.

Let us Quote on Your Needs.

WROUGHT WASHER MFG. CO.
THE WORLD'S LARGEST PRODUCER OF WASHERS
2256 SOUTH BAY STREET • MILWAUKEE 7, WISCONSIN

▲ For more details circle NED-2524 on enclosed inquiry slip ▲

Electronic Temperature Control

...with Alnor Accuracy

Alnor, pioneer in the field of electronic temperature instruments, brings you automatic, precise temperature control for heat-treating furnaces, bake ovens—in fact, for any heating device whether electrically heated or fuel fired. It's the Alnor Temperature Controller—simple in design and operation, its accuracy proved on thousands of installations in many industries.

Easily and quickly installed, this instrument is ready to give you accurate controller service on new or existing heating equipment temperature—you merely set the pointer at the desired temperature and forget your indicating and controlling problems. But find out for yourself how Alnor accuracy and dependability can serve you in controller service; write today for complete details on the Alnor Temperature Controller . . . Alnor accuracy at a price you can afford. Illinois Testing Laboratories, Inc., Rm. 529, 420 N. La Salle Street, Chicago 10, Illinois.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

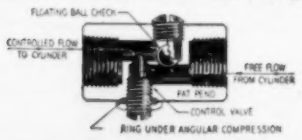
▲ For more details circle NED-2525 on enclosed inquiry slip ▲

FLOW CONTROL VALVE

for Cylinder Speed Adjustments over a WIDE RANGE IN AIR OR HYDRAULIC USE

The Pneu-Trol Flow Control Valve combines an efficient Stainless Steel FLOATING BALL CHECK which opens and closes at the slightest change in flow direction, with a Vernier Type VARIABLE NEEDLE ORIFICE adjustment in a compact control which has widened air and hydraulic cylinder application by providing precise control of cylinder action. Modifications of the Pneu-Trol Valve are available as Plain Check, check with Fixed Orifice (orifice drilled by customer in the Standard Check Valve), Needle Valve and Velocity Limiting Check, as illustrated at left. All Pneu-Trol Valves are made from bar stock in brass (up to 1000 psi) or steel (5000 psi) or other body metals to your specifications. All internal parts are Stainless. All valves available in 5 sizes—⅛", ¼", ⅜", ½", and ¾".

Attractive prices — immediate delivery. Write for illustrated circular and price list.



WRITE

Pneu-Trol Devices, Inc.
1432 N. Keating Ave., Chicago, Ill.

▲ For more details circle NED-2526 on enclosed inquiry slip ▲

VIBRATION TESTING MACHINE has automatic frequency control

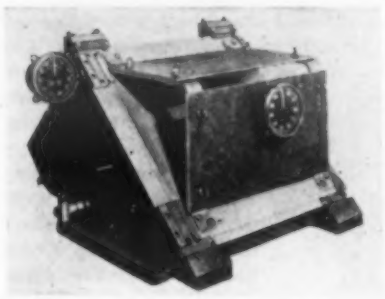
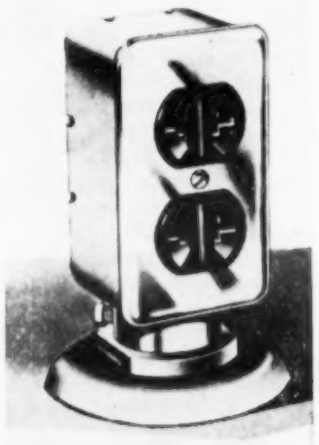


Table on model VMJ-3CC circular vibration testing machine has 45-degree angle with brackets for vertical or horizontal instrument mounting. Table capacity is 35 lb on 45-degree table and 25 lb on horizontal or vertical panels at 3600 cycles per minute and maximum amplitude. Frequency is infinitely variable from 300 to 3600 cycles per minute with mechanical drive or 180 to 3600 cycles with electronic control. Amplitude is infinitely variable from 0 to 0.031-in. circular translatory motion (one-half of circle of motion). Motor is 1 hp, 220 v, one-phase, 60 cycle ac, 3600 rpm. Automatic control which varys frequency from 600 to 3300 cycles per minute in a 3-minute cycle is available. Made by **Waugh Equipment Co.**, Room 1800, Graybar Bldg., New York 17, N. Y.

▲ For more details circle NED-2527 on enclosed inquiry slip ▲

ELECTRICAL FITTINGS for underfloor wiring systems



Revised line of electric service fittings for use with Nepcoduct underfloor wiring systems makes use of exterior locking facilities by imbedding type set screw. This feature permits additional wire space within fitting itself. Fittings in line are heavy gage steel with galvanized undercoating, light gray vinyl base enamel and have chrome-finished cover plates. They are available in vertical and horizontal housings, equipped with standard devices. A 1-in. nipple is used, with self-locking set screw locking housing to nipple from outside. Bushed opening for telephone wiring, connector block or buzzacall mounted types are available. Made by **National Electric Products Corp.**, Thirteenth Floor, Chamber of Commerce Bldg., Pittsburgh 19, Pa.

▲ For more details circle NED-2528 on enclosed inquiry slip ▲

DO YOU KNOW? The "whiz" tube, a mechanically operated interoffice communication system, dispatches messages pneumatically through a 2¾ x ⅜-in. rectangular tube. No carriers are required as message tickets are folded at their end to form a "sail." At a recent installation in Dun & Bradstreet offices, system is used to deliver inquiries received by telephone to huge filing area on two floors. Inquiries are delivered to 32 separate receiving points. System was installed by International Standard Trading Corp., 67 Broad St., New York 4, N. Y.

▲ For more details circle NED-2529 on enclosed inquiry slip ▲

NOW for the first time!

Stress Engineered **ARBOR PRESSES**

for greater STRENGTH

Stress-Engineered to put every pound of metal to work—to increase overall strength!

Features:
Big capacity! Heavy, stub-tooth alloy steel rack and pinion gears; Ram take-up adjustments; Lever or handwheel operation, plain tables or with platen. 3 Sizes: ½, 1 and 2 Tons.

WRITE FOR DESCRIPTIVE CIRCULAR!

benchmaster
MANUFACTURING COMPANY
1835 W. Rosecrans Avenue, Gardena, California
WORLD'S LARGEST MFGRS. OF SMALL PUNCH PRESSES AND MILLS

See our Booth #1805 at the March ASTE Show.

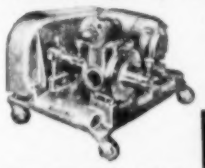
▲ For more details circle NED-2530 on enclosed inquiry slip ▲

PUMPING ALKYD RESINS & VARNISHES IN WEST COAST PAINT PLANT. INSTALLATION BY PACIFIC COAST ENGINEERING COMPANY

"Why **CARRY** *materials that* **FLOW?"**

BLACKMER PUMPS are cutting materials handling costs in this and many other plants pumping liquids varying from naphtha to tar.

Check your own liquid materials handling costs NOW. Blackmer pumps may be YOUR ANSWER.



Get "FACTS" about Rotary Pumps

Write for "FACTS" about Rotary Pumps. See why these pumps save money for owners.

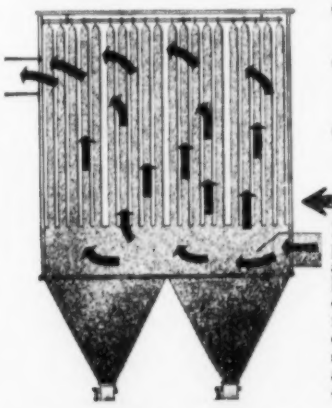
BLACKMER PUMP COMPANY
GRAND RAPIDS, MICHIGAN

▲ For more details circle NED-2531 on enclosed inquiry slip ▲

PANGBORN Cloth Bag Collector

for high-efficiency, low-cost dust collection!

This new Pangborn "CM" Cloth Bag Dust Collector extends the high-efficiency collection characteristics of the cloth filter to applications previously considered too costly. The Pangborn "CM" Collector is well adapted for collecting carbon black, graphite, pigments, soap, food dusts, metal oxides, and other dusts of similar characteristics. For further information, write for Bulletin 914 to: PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md.



- *Adaptable to wide variety of industrial dust problems due to new bag design*
- *Individual bags can be inspected, removed, and replaced without tools and without disturbing other bags*
- *Built for trouble-free service through simplified design and use of fewer parts*

Here's how it works:
Dust-laden air enters from the piping system. Coarse materials precipitate directly to the hoppers below the bags. Air containing finer dust particles flows into the bags, where the dust is filtered on the inner surface of the bags. Cleaned air is then discharged from the collector.

Look to Pangborn for the latest developments in Dust Control and Blast Cleaning equipment

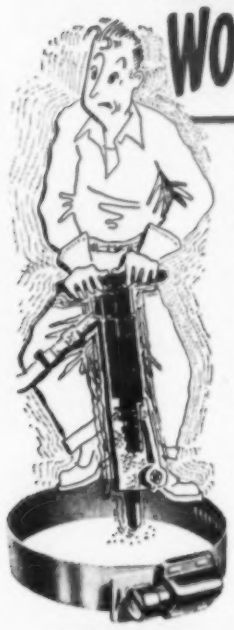
Pangborn DUST CONTROL

STOPS THE DUST HOG from stealing profits

▲ For more details circle NED-2532 on enclosed inquiry slip ▲

AERO-SEAL WORM-DRIVE HOSE CLAMPS

WON'T SHAKE LOOSE!



Wherever you have to clamp a hose connection tight . . . or wherever you want to lock two objects of any shape together in an unshakeable bond . . . your best bet is AERO-SEAL.

Threads of steel worm engage deep into slots in stainless steel band — hold tight under extreme vibration in automotive, aircraft and industrial applications. CAN'T SHAKE LOOSE.

One-Hand Installation

Install an Aero-Seal any place you can reach with thumb and one finger. Self-feeding when band engages worm threads. Thumb-grip and screwdriver types.

Re-use Again and Again

When hose is worn you RE-USE the same Aero-Seal again and again. RE-USE Aero-Seals on temporary clamping jobs—they conform to any shape without damaging band.

ALL AERO-SEALS HAVE STAINLESS STEEL BANDS

"Aero-Seal"® WORM DRIVE HOSE CLAMPS

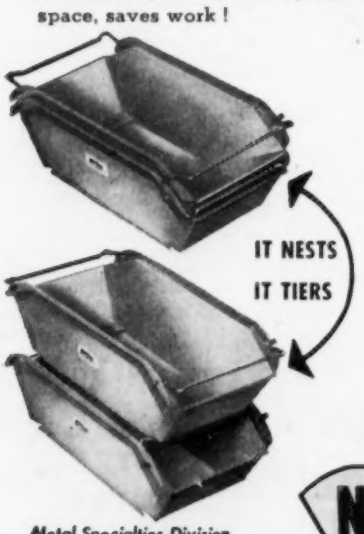
ANOTHER BREEZE MARK PRODUCT

BREEZE CORPORATIONS, INC.
41 South Sixth St. Newark, N. J.

For more details circle NED-2533 on enclosed inquiry slip

EASY DOES IT!

This photo shows some of the many advantages of the new NesTier and the NesTier system of materials handling. The contents of these NesTiers need no identification for they are all clearly visible as well as accessible. The NesTier 4 Wheel Truck, designed for easy movement through narrow aisles and congested areas, will return to the stock room with many times this number of nested, empty NesTiers. The NesTier system saves time, saves space, saves work!



TWO SIZES

No. 220—16 ga. steel, 22⅝" long, 12½" wide, ⅝" bails, weight 15 lbs. No. 175—18 ga. steel, 18¼" long, 9⅛" wide, ¼" bails, weight 6 lbs. All welded construction, standard baked enamel, green.

Write for full details on the NesTier system including racks, trucks, conveyor hangers, dollies and inserts.

Our service includes complete engineering advice to systematize small parts handling in your plant.

Metal Specialties Division

NESTIER®

THE CHAS. WM. DOEPKE MFG. CO., Inc.
ROSSMOYNE, OHIO

For more details circle NED-2534 on enclosed inquiry slip

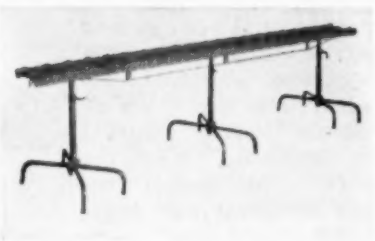
MULTIPLE DRILLING MACHINE incorporates five drilling units

Drilling of five spots on a small brass ball is function of drilling machine which incorporates four model KH Govro-Nelson drilling units mounted horizontally and one unit mounted vertically. Horizontal units drill four spots of 0.140-in. diameter, while vertical unit drills one 0.154-in. diameter hole up from bottom. Operator loads parts manually. When drilling is completed, manual unclamping automatically ejects part into chute. Set-up completes five drilling operations at rate of one part each 4 seconds, including loading and unloading time. Made by **Govro-Nelson Co.**, 1935 Antoinette St., Detroit 8, Mich.

For more details circle NED-2535 on enclosed inquiry slip

HEAVY LOAD CONVEYOR wheel type made in 5 and 10-ft sizes

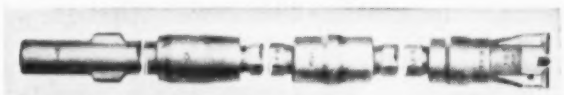
This 12-in. wide heavy duty Load-Veyor wheel conveyor is made in 5 and 10-ft sections with 45 and 90 degree curves to suit special needs. Ball-bearing 2-in. diameter wheels are ⅝ in. wide and are spaced on slightly less than 3-in. centers. Conveyors are rated to take loads of 1000 lb covering the surface of conveyor and for individual loads of up to 300 lb per unit. They are available with welded-on connectors which are inter-connectable with majority of other wheel conveyors of same size. Extra strength and durability is provided by use of tension members without addition of unnecessary weight. Made by **Market Forge Co.**, Materials Handling Div., 54 Garvey St., Everett 49, Mass.



For more details circle NED-2536 on enclosed inquiry slip

DEEP-HOLE ROCK DRILL features tungsten carbide tool bits

Holes ranging in depth from 20 to 250 ft can be drilled in rock by using these drilling tools in standard percussion type rock drills. Tool consists of Tru-Seal shank,

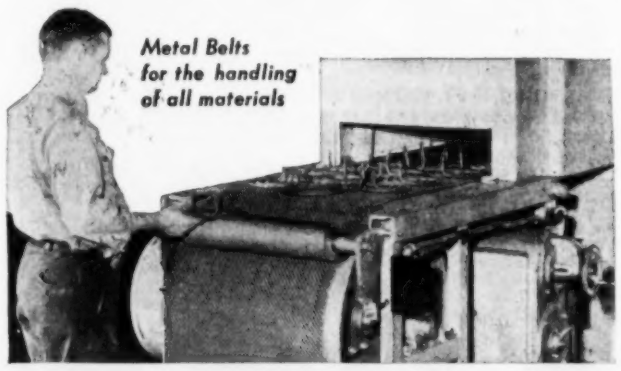


adapters, couplings, extension rod and Rok-Bit tungsten carbide bits. Offered in 1⅞ and 3-in. diameters, drills are usable for drilling grout, test, sublevel bench stopping or blast holes. Couplers and adapters are self-cleaning and self-cooling. Made by **Rock Bit Sales & Service Co.**, 2520 E. Cumberland St., Philadelphia 25, Pa.

For more details circle NED-2537 on enclosed inquiry slip

The Right Belt for the Job BY ASHWORTH

Correct Conveyor Belt selection assures longer life, greater efficiency. Ashworth engineers have the ability to recommend the right type of belt to keep *your* product *on the move.*



WRITE FOR ILLUSTRATED CATALOG 47D

ASHWORTH BROS., INC.
METAL PRODUCTS DIV. • WORCESTER, MASS.

Sales Engineers located in Buffalo • Chattanooga • Chicago • Cleveland • Detroit Los Angeles • New York • Philadelphia • Pittsburgh • Seattle

Canadian Rep., PECKOVER'S LTD. - Toronto - Montreal - Halifax - Winnipeg - Vancouver

For more details circle NED-2538 on enclosed inquiry slip

DON'T LOSE VALUABLE DUST!

Buell's wide experience in the recovery of Valuable Dust can help you boost your plant's efficiency now—when peak efficiency is really needed!

To learn how a Valuable Dust Recovery System can be designed to suit your plant's special requirements, write today for full information on the *3 basic systems* of efficient dust recovery and dust collection. Ask for the new, illustrated Buell 'Dust Recovery' bulletin. Buell Engineering Co., Dept. 23-C, 70 Pine Street, New York 5, New York.

buell

Engineered Efficiency in Dust Collection

For more details circle NED-2539 on enclosed inquiry slip

Line-O-Power

STRAIGHT LINE DRIVES

High quality, compact design incorporating Duti-Rated high hardness precision gears assembled in streamlined housings of rugged cast iron.

Accurate high production machine tools assure low original cost. Simplified construction, direct splash lubrication, quality workmanship assure long wear life. Efficiencies of 96% or higher.

Double and triple reduction—capacities 1 to 175 h.p., ratios 5 to 1 up to 238 to 1.

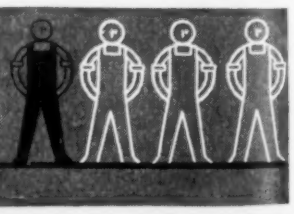
FOOTE BROS. GEAR AND MACHINE CORPORATION
Dept. NE, 4545 S. Western Ave.
Chicago 9, Illinois

WRITE for BULLETIN LPB

FOOTE BROS.
Better Power Transmission Through Better Gears

For more details circle NED-2540 on enclosed inquiry slip

triple your "men-power"



with this LOW COST STUEBING ENGINEERED TRUCK . . . . Triple your power—but not your payroll — with the truck your men prefer. Fleet owner studies prove it pays for itself in the first three months. Unusual ease of operation make it labor's favorite. Easy lift, automatic action, positive safety. Machine bolted frames; all parts machined and standardized. Timken bearinged steering column.

For full details on the Red Arrow (single-stroke) or the Hydromatic (multi-stroke) send for Bulletin "G".

LIFT TRUCKS, INC.
Walter Stuebing, President
2425 Spring Grove Ave. Cincinnati 14, Ohio

For more details circle NED-2541 on enclosed inquiry slip

Clipper
BELT LACING EQUIPMENT
For Belts and Tapes 1/16" to 3/8" thick

Industry's Most DEPENDABLE Belt Joints

Proven by use and comparison, Clipper Belt Hooks assure longest service. Made from uniformly high quality, fatigue resisting wire produced exclusively to meet our rigid specifications. For easy application and maximum uninterrupted service, use GENUINE Clipper Belt Lacers. There is a type and size for your needs.

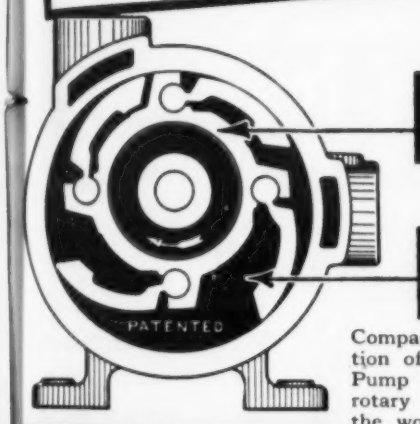
No. 9 Portable Lacer

Ask your Mill Supply Jobber for CLIPPER Products.

CLIPPER BELT LACER CO.
Grand Rapids 2, Michigan

▲ For more details circle **NED-2542** on enclosed inquiry slip ▲

LEIMAN AIR PUMPS GIVE YOU *Greater Capacity!*



SMALLER PISTONS *provide* **LARGER AIR SPACE**

HINGED WINGS *take up their own wear*

Compare this cross-section of a Leiman Air Pump with any other rotary air pump. It is the working air space that counts—and Leiman provides 2 to 3 times more area, per size and weight of pump.

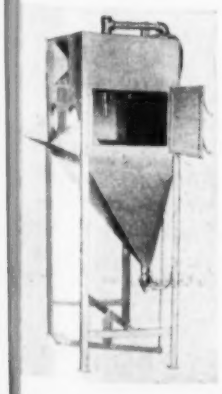
Handle air pressure, vacuum or suction jobs with much smaller Leiman Rotary Air Pumps. You save weight and space—run at lower r.p.m.—have fewer moving parts—no springs, gaskets or packings—no tips to renew—nothing to give trouble. Leiman patented leak-proof hinged wings maintain fully-rated pressure or vacuum for years and years.

What is your air application?

Send us details. Leiman engineers offer over 60 years' experience with thousands of air applications.

Catalog and Application Data sent on request. For Pumps—write DEPT. A

LEIMAN *Rotary* **AIR PUMPS** *(Pressure—Vacuum)*



Metal Cleaning and Finishing without acids or scratch brushes

Fast, low-cost, safe, uniform!

LEIMAN SANDBLASTS

Clean up scaly, rusty, rough surfaces—prepare better surface for plating, enameling or painting—stencil letters and designs—more rapid matte or satin finishes. Use unskilled help. Many models, treadle or automatic.

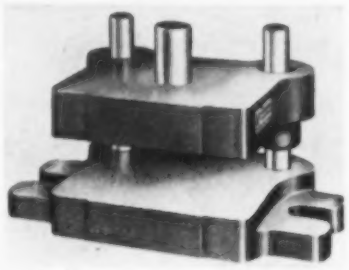
For Sandblasts—write DEPT. B

LEIMAN BROS., Inc. 167 Christie Street, Newark 5, N. J.

AIR PUMPS • AIR MOTORS • SAND BLASTS • DUST COLLECTORS

▲ For more details circle **NED-2543** on enclosed inquiry slip ▲

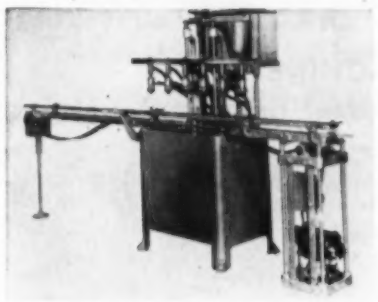
DIE SETS
line made in various types, sizes



High and uniform precision incorporated in line of Die-Co standard die sets results in smooth operation for long periods of time. All component parts are interchangeable. Sets are available from stock in regular, reverse and long-narrow types in all standard sizes. Made by **Die Supply Co.**, Dept. NE, 1400 Brookpark Rd., Cleveland, O.

▲ For more details circle **NED-2544** on enclosed inquiry slip ▲

LIQUID FILLING MACHINES
equipped with six to twelve spouts



Capable of filling glass or metal containers from fractional ounces to 2 gallons, straight line gravity filling machines are equipped with 10-ft motor driven conveyor. Gravity feed tank is adjustable for height and is controlled with its own individual float control mechanism. Models with six, eight, ten or twelve spouts are available. Entire spout is made of two sleeves without packing, eliminating element of contamination. Also, hot materials can be filled into containers safely with this type of spout. Adjustable tank makes filling of foamy materials possible. Made by **MRM Co.**, 193 Berry St., Brooklyn 11, N. Y.

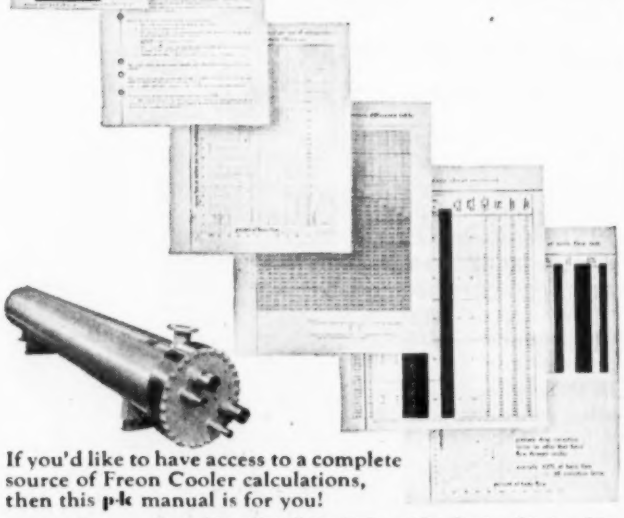
▲ For more details circle **NED-2545** on enclosed inquiry slip ▲

SUBMINIATURE SLIPRINGS
features minimum torque friction

Wide range of subminiature sliprings is available for applications requiring mechanical and dielectric strength, insulation and arc resistance, absolute minimum torque friction and compact construction with silver, gold or platinum rings molded in place. Intended for transfer of electricity from a stationary to a rotating part, heat resistant sliprings are fabricated with Formex magnet wire. Molded parts are of NC-101 compound which has tensile strength of 4000-4500 psi, flexural strength of 6000-6500 psi. Rockwell hardness 27.0 (M scale) and heat distortion temperature of 225-235° F. Made by **Naer Corp.**, 631 S. Sepulveda Blvd., West Los Angeles 49, Calif.

▲ For more details circle **NED-2546** on enclosed inquiry slip ▲

Send for the new P Freon Cooler Catalog



If you'd like to have access to a complete source of Freon Cooler calculations, then this p-k manual is for you!

Some of the subjects, Tables, Charts, and Data Sheets: • Selection of dry expansion type Freon Coolers • Surface required per ton of refrigeration • Direct reading log mean temperature difference table • Cooler selection data sheets • Freon Cooler dimensions and data (single and two circuit) • Typical piping and control arrangements

the **P Patterson-Kelley Co., Inc.**
121 Burson St., E. Stroudsburg, Penna.

1103

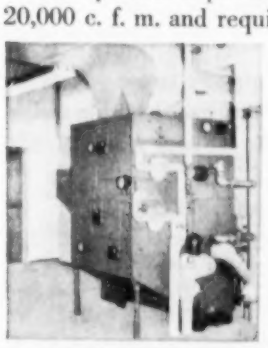
▲ For more details circle **NED-2547** on enclosed inquiry slip ▲

Control Atmospheric Conditions with Precision

Control of atmospheric conditions for tests and experiments, maintenance of standard conditions while working with hygroscopic materials, prevention of moisture damage to instruments or materials, improved drying processes . . . all are provided more easily and reliably with this new Niagara "Controlled Humidity" Method.

The equipment is simple, easily maintained and gives trustworthy, automatic operation. A liquid absorbent, "Hygrol", removes the moisture from the air directly so that refrigeration is needed only for sensible heat removal, saving equipment and operating expense.

Units provide capacities ranging from 1000 c. f. m. to 20,000 c. f. m. and require less space than conventional apparatus. Conditions are completely controlled at will in the temperature range from 34°F. to 140°F. and below 32°F. if required.



Write for Bulletin No. 112, address:

Niagara Blower Company, Dept. ED. 405 Lexington Ave., New York 17, N. Y.

▲ For more details circle **NED-2548** on enclosed inquiry slip ▲

Light Where Light is Needed MOST

FOSTORIA LOCALITES
Help Your Workers See Better

Lights the Vital Seeing Zone

Machine Tools, Inspection and Assembly Benches

MODEL 3470-P-172 Overall length 48¼". Three instantly adjustable joints. Circular base for machine or wood screw mounting

$7.16 EACH in pkg. of 6 Single Units $8.95 ea.

- **Rugged Construction** withstands vibration and rough handling
- **Instantly Adjustable** with flexible ball and socket joints
- **Baked Enamel Finish**—Exterior, Smooth Gray—Reflector Interior, high temperature White
- **Reflector** accommodates 100 watt or any A-19 or A-21 medium screw base lamp
- **Wired Complete** with switch socket and 8 ft. oil-resistant cord and moulded plug

Write for Complete Catalog of Localite models with various type reflectors, arms and bases for every industrial use.

THE FOSTORIA PRESSED STEEL CORPORATION FOSTORIA, OHIO

Localites are available through electrical wholesalers everywhere.

LOCALITE fostoria for Light ON the Job

Reg U S Pat Off

▲ For more details circle **NED-2549** on enclosed inquiry slip ▲

INSPECTION'S EASY
with T & B Sta-Kon® Self-Insulated Terminals*

THERE'S A T&B ENGINEERED PRODUCT for every wiring job in the complete T & B line of fittings for all conductors and raceways

One look through the *translucent* nylon insulation on T & B Sta-Kon Self-Insulated Terminals shows the stake mark that says *the job's OK.*

These new components end the risk of shorts between closely-mounted terminals. Insulation prevents metal-to-metal contact — withstands attack by gasoline, naphtha, hydraulic fluids. Shipped in one piece, assembled in one operation — with SHURE-STAKE Hand Tools or air-powered types.

Engineered Right—Distributed Right. Sta-Kon Self-Insulated Terminals are typical of all T & B quality fittings designed for lowest installed costs. Furnished 100% through T & B distributors under the T & B Plan.

*Patent Pending

THE THOMAS & BETTS CO.
INCORPORATED
24 BUTLER STREET, ELIZABETH 1, NEW JERSEY
Manufacturers of Electrical Fittings since 1898
Originators of self-insulated solderless terminals in 1935

▲ For more details circle **NED-2550** on enclosed inquiry slip ▲

TRI-SAW All-Purpose Portable Power Hacksaw

Makes Any Cutting Job Easy . . . Quick . . . Economical!

Cuts Most Anything Anywhere—Wood, Sheet Metal, Heavy Metal, Nails, Pipe.

PRICE ONLY $37.50

Use this sensational time and work-saving tool and you'll say it is the best portable all-purpose saw on the market! Only Tri-Saw gives you all these advantages:

- Fits any ¼" electric drill
- Uses ordinary hacksaw blades
- Cuts directly into floors and walls *without starting hole*
- Simple construction
- No side torque or spin
- Balanced pistol grip design

ATTENTION! JOBBERS AND DEALERS
Profitable possibilities for aggressive distributors. Write today for details.

Manufactured by TRI-SAW CORPORATION
6611 Clayton Road • St. Louis 17, Missouri

For more details circle NED-2551 on enclosed inquiry slip

Left—Style 14500 R Suspended Head Bag Closing Machine. Hang it up any place!

NOW!
EFFICIENT BAG CLOSING FOR SMALL PLANTS

HERE is the popular, economical Union Special Suspended Head Bag Closing Machine that offers many plants an excellent solution for handling varying volumes of work. Check these features: Easily installed anywhere in your plant with overhead pulley and counterweight or top balancer! Built-in motor, thumb-controlled clutch, and automatic brake! Plug it in and go to work! Adaptable to fabric or paper bags of various sizes!

SEND FOR THIS NEW BULLETIN!

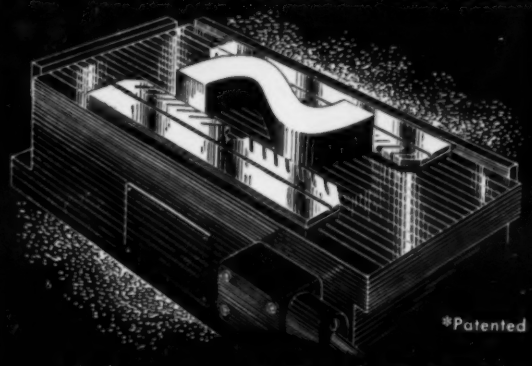
Get your copy of this 16 page illustrated bulletin containing helpful data and charts on the complete Union Special line of bag closing machines. UNION SPECIAL MACHINE COMPANY, 416 N. Franklin St., Chicago 10, Ill.

UNION SPECIAL

For more details circle NED-2552 on enclosed inquiry slip

HOLD BRASS GLASS ALUMINUM

...any rigid non-magnetic materials ON YOUR MAGNETIC CHUCKS!



*Patented

Magna-Vise* DOES IT!

For all the details . . . write Dept. ND32.

Hanchett MAGNA-LOCK CORPORATION
Magna-Lock
Magnetic Chucks and Devices
BIG RAPIDS • MICHIGAN, U. S. A.

For more details circle NED-2553 on enclosed inquiry slip

COLLATING TRAYS
fold compactly for storage

Speedy gathering of pages by hand for assembly into sets is facilitated by finger-tip gathering trays which can be set up quickly on any desk top. All pages are within easy reach at natural arm level, minimizing tiresome tramping and reaching. Pages are slipped from sloping faces of trays with the finger-tips and assembled as desired. When not in use trays nest compactly for handy storage in 9½ x 11 x 8½-in. space. They will be sold nationally through franchised dealers. Made by **Thomas Mechanical Collator Corp.**, Room 516, 30 Church St., New York 7, N. Y.

For more details circle NED-2554 on enclosed inquiry slip

PHOTOCOPY MACHINE
also makes offset lithography plates

Tru-Copy-Phote dual model photocopying machine performs two functions. It makes photo copies of any typed, printed, written or drawn material in sizes up to 18 x 24 in. in 3 to 5 seconds exposure. It also makes burn-in plates up to 11 x 17 in. in 10 minutes for use with all types of offset presses. For burn-in process, film or paper negative can be used. Machine is equipped with powerful set of cold lights. Additional features are unbreakable glass top; removable filter, separate timers for photo copy work and making plates; high compression cover; and positive lock handle. Machine lists at $185. Made by **General Photo Products Co.**, Dept. NED, 15 Summit Ave., Chatham, N. J.

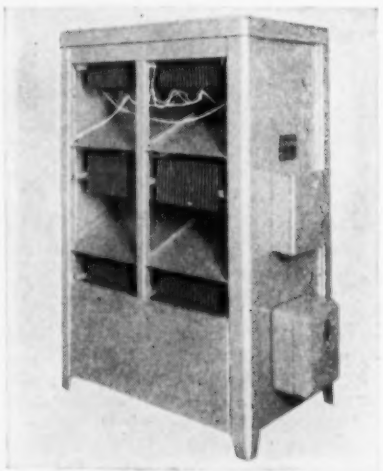
For more details circle NED-2555 on enclosed inquiry slip

STRAIGHTENING-FORCING PRESS
hydraulic machine rated 75 tons

Long removable table on this C-frame hydraulic press adapts it for dual purpose. With table, press can be used to straighten gun barrels and similar long objects. When table is removed, press can be employed for conventional straightening as well as for forcing operations through bed opening. Dual hand lever is interlocked with foot treadle, and the ram will not descend until both hand levers and foot treadle are depressed. Made by **American Steel Foundries**, Elmes Engineering Div., 1150-C Tennessee Ave., Cincinnati 29, O.

For more details circle NED-2556 on enclosed inquiry slip

SELENIUM RECTIFIER
has output of 230 v dc



Sufficient 230 v dc power is turned out by this selenium rectifier to operate direct current motors up to 25 hp or to energize electromagnets or other direct current equipment. Unit operates from standard three-phase alternating current power lines and has no moving parts. Overload and surge capacity is up to 600 per cent of normal rating. Rectifier features instant operation with no warm-up period required, low standby power consumption and operating efficiency of approximately 80 per cent. It is self-contained in one steel cabinet measuring 26 x 40 x 65 in. Made by **Electronic Rectifier Co.**, P. O. Box 395, Rochester 2, N. Y.

For more details circle NED-2557 on enclosed inquiry slip

IDEAL CLIP-A-TAPE GUMMED TAPE DISPENSER
CUTS THEM ALL!

CLOTH TAPE
REINFORCED TAPE
STRING-FILLED TAPE
STANDARD KRAFT

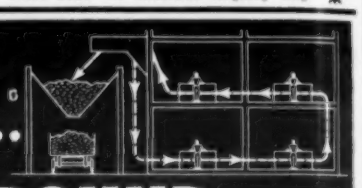
Measures any length to 36"
Handles any width to 3"

- Measures your tape—Saves 10% to 20%.
- Secures top production.
- Insures safe positive sealing.
- Produces perfectly moistened tape at any speed.

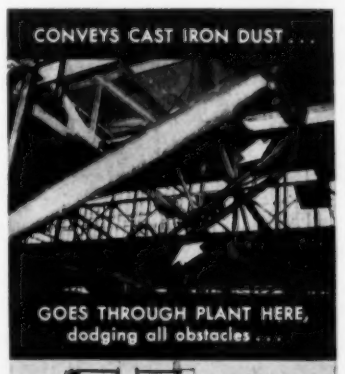
IDEAL STENCIL MACHINE CO.
134 IOWA AVE., BELLEVILLE, ILL.

For more details circle NED-2558 on enclosed inquiry slip

upstairs...
downstairs...



ALL AROUND YOUR PLANT—
Hapman TUBULAR CONVEYORS
can carry flowable materials at tremendous savings!



IF YOU HANDLE flowable materials similar to *any* of these **PRODUCTS:**

Bulk Chemicals: (Wet dry, abrasive, corrosive, radioactive)

Food: Starch, flour, malt, grain, coffee or **BY-PRODUCTS:**

Metal Chips from machine tools . . .

Sludge from quench tanks or grinding wheels . . .

Coal or clay, etc.

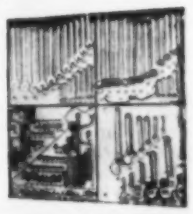
YOU MAY REAP ENORMOUS SAVINGS—some of America's most cost-conscious firms are doing it—with plant-wide systems of Hapman Tubular Conveyors. The list of materials you can handle is almost endless. You gain great advantages, both mechanically and in terms of labor saved. The stakes are high—why not investigate now? Write today for Bulletin ND-352.

Hapman CONVEYORS, INC.
DIVISION HAPMAN-DUTTON COMPANY
KALAMAZOO MICHIGAN

For more details circle NED-2559 on enclosed inquiry slip

All Privates, "Brass," and Even Mules ...Know

PROTO means PROfessional TOols!



Industrial Tools • Pliers
Wrenches • Screwdrivers
Pullers • Punches • Chisels
Sockets • Many Others

Accurate manufacture is a big reason why PROTO tools are *professional* tools. Close tolerances are met with precision machines and advanced methods in modern factories. As a result, the tools fit properly and operate smoothly, making them faster, safer and easier to use. Field-tested designs, PROTO-specified alloy steels and scientific heat treatment are more reasons why you get *professional* quality when you buy tools from your PROTO dealer. Send 10¢ for 68-page catalog to

PLOMB TOOL COMPANY
2275U Santa Fe Ave., Los Angeles 54, Calif.

Eastern Factory—Jamestown, N.Y.

5286
PROTO TOOLS
REG U S PAT OFF LOS ANGELES MADE IN U S A

For more details circle NED-2560 on enclosed inquiry slip

NEW! INEXPENSIVE PEDESTAL GRINDER

USES MANUFACTURER'S OWN MOTOR

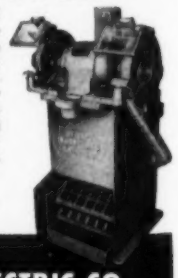
FEATURES
- MOTOR — Oversized ball bearings, lubricated for life.
- ADJUSTABLE WHEEL GUARDS—Grinding surfaces of worn wheels always accessible.
- SIMPLE WHEEL CHANGES—Hinged cover flips up to expose entire wheel. Uses up to 14"x 2" wheels.
- STARTING SWITCH PROVIDES OVERLOAD PROTECTION.
- SAFETY PLATE EYE SHIELDS.
- ADJUSTABLE TOOL RESTS.

The new Reuland line of "Utility" pedestal grinders, buffers and sanders offer users great savings in both first cost and operation. Powered by special Reuland grinder motors.

Reuland "utility" units are used for medium or heavy-duty work and are ideally suited to both large and small shops.

Available for 110 and 220 volt single phase, or 208, 220/440, 380 and 550 volt 3 phase—50 or 60 cycle.

DUSTLESS GRINDER



Used wherever amounts of abrasive dust may be harmful to other equipment or worker health. Blower collects all dust and recirculates clean air back into shop. Front opening trap.

Write for price list and folder No. G-2000-3

REULAND ELECTRIC CO.
ALHAMBRA, CALIFORNIA • DISTRIBUTORS IN PRINCIPAL CITIES

For more details circle NED-2561 on enclosed inquiry slip

Better FLOOR PROTECTION BEGINS WITH ALBION CASTERS!

Albion casters offer you greater floor protection, smoother handling over all types of floor surfaces, plus additional ease in transporting heavier loads with complete safety. A.I. casters pay-off in reduced maintenance. They're better-built . . . engineered for the job!

Available in a size, style, capacity and wheel type in both swivel and rigid models to meet every conceivable industrial application. It will pay you well to specify the best...specify Albion Industrial Casters.

Write today for your free copy of the big new Albion Caster catalog.

Represented in Canada by: C. J. McDONALD, 365 Yonge St., Toronto

ALBION INDUSTRIES, Inc.
ALBION, MICHIGAN

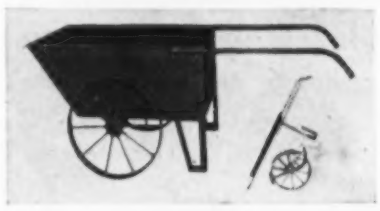
For more details circle NED-2562 on enclosed inquiry slip

SELF-SEALING COUPLING has no appreciable pressure drop

When two halves of mated couplings are connected, flow is unrestricted and there is no appreciable pressure drop. When disconnected, spring in one of the mating halves causes flapper valve to drop down at a 90-degree angle to stop flow from source. Automatic and leakproof, coupling can be used for pipelines, auxiliary fuel tanks and similar applications. Offered in range of sizes, fitting is made of aluminum alloy by **E. B. Wiggins Oil Tool Co.**, Dept. NED, 3424 E. Olympic Blvd., Los Angeles 23, Calif.

For more details circle NED-2563 on enclosed inquiry slip

MULTIPURPOSE CART constructed to handle heavy loads



Design and balance of this 130-lb multipurpose cart insures easy wheeling and dumping of heavy scrap loads, small parts, liquids, ashes, mixed concrete, fertilizer and other materials. Heavy, welded steel body has reinforced flange around top edge, angle iron legs and withstands rough usage. Inside of body measures 45 in. long at top, 32 in. at bottom and is 24 in. wide and 17 in. deep. Tubular handles extend 34 in. from body. Made by **Palmer-Shile Co.**, 16015 Fullerton St., Detroit 27, Mich.

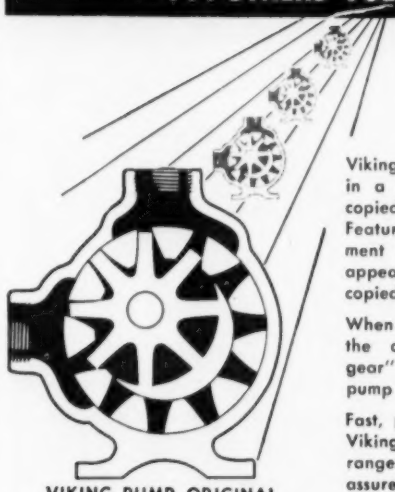
For more details circle NED-2564 on enclosed inquiry slip

TRAFFIC-LINE PAINTER has gravity fed controlled flow

Double as well as single traffic lines can be painted on parking lots and industrial plant, warehouse and office floors with Controlled-Flo traffic line Paint Striper. Noiseless in operation, machine is gravity fed and employs all-metal sled-type spreader which accommodates striping or zone paint of any standard make. Receiving paint from gravity line, distribution apron feeds it evenly to finger rollers which spread the fluid. Line is offset painted to allow operator full view at all times. Controlled flow insures steady, even application on any smooth surface, such as macadam, asphalt, concrete or wood. Made by **Universal Yonkers Corp.**, Line Marker Div., 137N Alexander St., Yonkers 2, N. Y.

For more details circle NED-2565 on enclosed inquiry slip

WHERE VIKING PUMPS LEAD ... OTHERS FOLLOW!



VIKING PUMP ORIGINAL GEAR-WITHIN-A-GEAR PRINCIPLE

Viking—the original "gear within a gear" pump is the most copied of all rotary pumps. Feature after feature, improvement after improvement FIRST appearing in VIKING pumps is copied by many manufacturers.

When you need pumps, specify the original "gear within a gear" Viking to be sure the pump is built for your job.

Fast, positive self-priming of all Viking pumps in the complete range of sizes, ½ to 1050 gpm, assures you of dependable pumping of either light or heavy liquids in the size and style needed.

Ask for descriptive bulletin 52SG today.

VIKING AN HONORED NAME IN PUMPING

Viking PUMP COMPANY Cedar Falls, Iowa

See Our Catalog in SWEETS

For more details circle NED-2566 on enclosed inquiry slip

STOP BASEMENT WALL LEAKS

Smooth-On No. 7 Iron Cement stops your basement wall and floor leaks. You can apply Smooth-On No. 7 with a trowel or stiff brush, to cracks, holes, porous spots or seams in concrete, brick, stone walls or floors. This effective Smooth-On Cement will stay in place, because it expands slightly as it sets. You can also use Smooth-On No. 7 to stop leaks in tanks, cisterns, pools, troughs, fountains, etc. Use it too, to seal openings where piping passes through walls. Sold in 1, 5, 20, and 100 lb. sizes.

FREE Repair Handbook 40 pages packed with helpful suggestions for repairs to equipment and piping, in the shop, around the home and car. Also ask for leaflet describing the uses of Smooth-On No. 7. Write today.

SMOOTH-ON MANUFACTURING COMPANY, Dept. 10
570 Communipaw Ave., Jersey City 4, N. J.

Do it with SMOOTH-ON NO. 7 IRON CEMENT

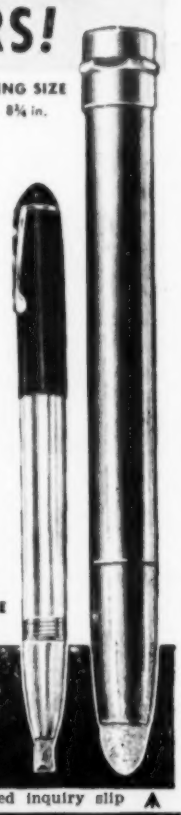
For more details circle NED-2567 on enclosed inquiry slip

In OUR Plant we mark parts in COLORS!

Yes, in *colors* for easier assembling, stocking, identification, etc. And industry is finding the Flo-master Felt-Tip Marker ideal for *all* types of marking. Its felt tip glides over any surface—metal, plastic, wood, etc. with broad, bold lines or fine lines. Flo-master semi-opaque inks—waterproof, non-smudging, fast-drying—come in a wide range of colors.

For light colored surfaces, use Transparent Inks with "POCKET SIZE" Flo-master. For dark, hard-to-mark surfaces, use Semi-opaque Inks with the "KING SIZE" Flo-master.

Ask your supplier or write to Cushman & Denison Mfg. Co., 153 W. 23rd St., N.Y. 11



Flo-master FELT-TIP MARKER

For more details circle NED-2568 on enclosed inquiry slip

For All Kinds of Slow Speed Requirements SPECIFY Century GEAR MOTORS

2 to 3 H. P.
Type 1R gear motor.
Single gear reduction right angle shaft.

Rugged, Quiet, Long Life Operation

There are many reasons why Century gear motors assure satisfactory performance day after day:

Simple design, coupled with accurate machining produces a rugged unit that stays in alignment.

Precision gear cutting assures quick operation.

Streamlined design provides improved appearance and smooth easily cleaned surfaces.

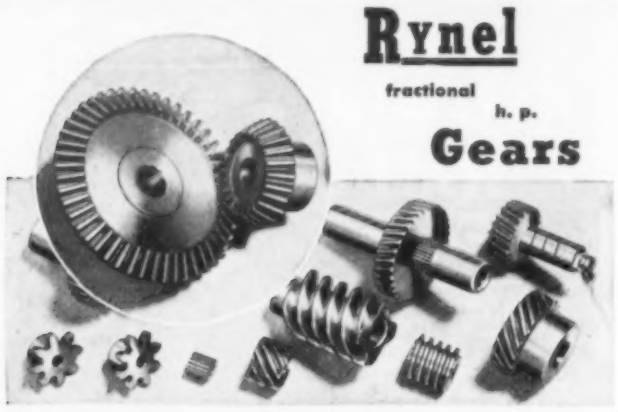
Century Gear motors are available in a wide range of types from 1/8 to 50 horsepower. Specify Century gear motors for all your slow speed power requirements.

CENTURY ELECTRIC CO.
1806 Pine St., St. Louis 3, Mo.
Offices and Stock Points in Principal Cities

692R

For more details circle NED-2569 on enclosed inquiry slip

Rynel fractional h. p. Gears



Certified—BLANK TO FINISHED GEAR

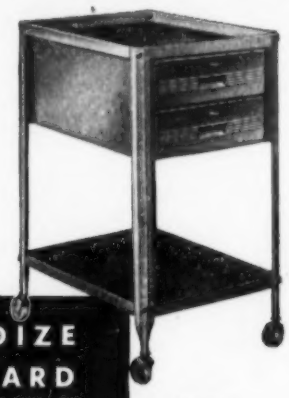
Rynel Certified Gears are made exactly to your specifications. Accuracy, tooth form and finish are controlled from the start, using accurately formed blanks from our own blanking department. Experienced gear men cut them on the latest precision equipment. Finished quality is checked by skilled gear inspectors. • That's why designers, engineers and product development men recognize Rynel Certified Gears for quality and dependability.

SPUR • HELICAL • WORM • WORM GEAR • INTERNAL • SEGMENT SPROCKET • RATCHET • STRAIGHT-TOOTH BEVEL GEARS

Send For Our Latest Bulletin

Rynel Corporation
302 MILLER ST., STERLING, ILLINOIS

For more details circle NED-2570 on enclosed inquiry slip



STANDARDIZE ON STANDARD **HALLOWELL** CARRY-TOOL

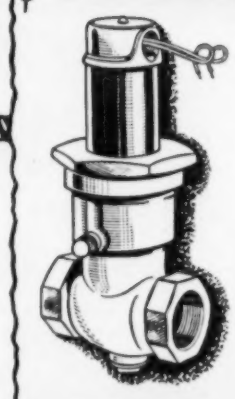
use it anywhere

It's the handiest, most convenient carrier in the shop. Use it on assembly lines, at machines, in the toolroom. Use it for inspection, stockroom, maintenance, and mounting small tools. Roller bearing drawers with padlock attachments are standard equipment. Write for descriptive literature. STANDARD PRESSED STEEL CO., Jenkintown 24, Pennsylvania.

HALLOWELL SHOP EQUIPMENT DIVISION **SPS** JENKINTOWN PENNSYLVANIA

For more details circle NED-2571 on enclosed inquiry slip

ATKOMATIC
ELECTRICALLY OPERATED VALVES



ATKOMATIC Valves can TAKE it! EXTRA rugged to withstand more hard use than you'll ever demand of them. Sturdy, compact, built for any pressures up to 3,000 pounds. In thousands of installations, they are delivering dependable, trouble-free service.

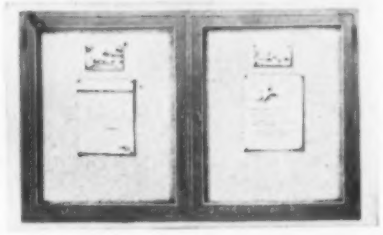
Wide variety of types usable for any medium not harmful to bronze. Perhaps we have already worked out YOUR valve problems . . . why not present them to us without obligation? In your plant or on YOUR product, you can always depend on ATKOMATIC.

Send for Literature

ATKOMATIC VALVE CO.
545 W. ABBOTT ST., INDIANAPOLIS, INDIANA

For more details circle NED-2572 on enclosed inquiry slip

BULLETIN BOARDS
made of metal with cork backs



Available again for inside or outside use, Dav-Son line of metal bulletin boards has cork backs. Illustration shows 48 x 30-in. board with two set-in glass doors and lock and key. Various colors are offered. Design and finish are such that boards can be used in office or lobby, yet are strong enough for factory or shop. Made by **A. C. Davenport & Son, Inc.**, 311 N. Desplaines St., Chicago 6, Ill.

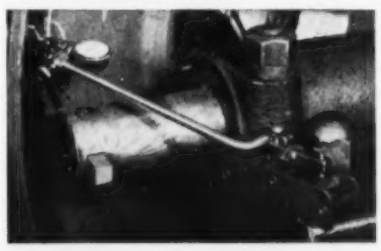
For more details circle NED-2573 on enclosed inquiry slip

INDUSTRIAL DUST PAN
large capacity unit has wheels

Debris is swept into 18 x 18 x 18 in. pan of this industrial dust pan after it is rolled into position, adding efficiency to plant cleaning operations. The 45-lb unit can be moved into places too restricted for a wheelbarrow. Built to withstand rough use, unit has pan of 16-gage sheet steel, angle iron frame and handle of 1-in. tubing. Overall height of all-welded unit is 48 in. It has two 8-in. rubber tired, ball bearing wheels. Made by **Palmer-Shile Co.**, 16015 Fullerton St., Detroit 27, Mich.

For more details circle NED-2574 on enclosed inquiry slip

MAGNETIC INDICATOR HOLDER
clings with 45 to 50-lb pull



A precision adjusting device which controls position of dial holding rod is incorporated in model 200 magnetic dial indicator holder. This design minimizes possibility of spring tension lifting indicator off work after instrument is placed by hand. Machinist simply swings rod and indicator to within ½ in. of work, then by turning screw on magnetic base, makes minute adjustment either against or away from work without touching rod or indicator. Magnetic base holds with 45-50-lb pull. Rod is 6½ in. long, nonmagnetic and of ¼-in. stainless steel. It is set in ball socket allowing universal settings and immediate readings. Adaptor bushings can be had for indicators having 5/16 or ⅜-in. openings. Made by **Cullen Mfg. Co.**, 1316 Clark St., Racine 1, Wis.

For more details circle NED-2575 on enclosed inquiry slip

use **CHAMPION** AIR HOSE REELS to increase production and shop safety!

Champion Air Hose Reels put air lines within arms reach of the worker, yet keep hose off the floor to prevent accidents. They can be mounted conveniently on ceilings, walls or floors. They are totally enclosed — free from dust and grime. Inside sheaves prevent kinking — over 30 feet of special spring steel rewind hose at a governed speed. There are 4 stops to a complete circle so that just the needed amount of hose is exposed — hose is extra tough 2 braid for long hard usage. All connections are air-tight, non-leaking. Write TODAY for complete data and a FREE copy of the Champion Manual that contains valuable data on handling compressed air.

CHAMPION PNEUMATIC MACHINERY CO.
837 N. Pleasant Street Princeton, Illinois

AIR HOSE REELS • AIR COMPRESSORS • AIR ACCESSORIES

For more details circle NED-2576 on enclosed inquiry slip

HYSTAWAY® BACKHOE

...for mounting on New or Used Caterpillar D8, D7, and 74-in. gauge D6 Track-type Tractors.

Depending on job requirements, the Hystaway can be used as a BACKHOE, SHOVEL, DRAGLINE, CLAMSHELL, CRANE. Mounting on tractor can be done in an hour (2 men); removed in ½ hour after initial installation... Full production bulldozing or normal tractor operations can then be accomplished.

See your Caterpillar-Hyster dealer; or write for catalog.

HYSTER® COMPANY

World's largest manufacturer of Tractor Winches. More than 40,000 satisfied owners.

2906 N. E. Clackamas, Portland 9, Oregon
1806 North Adams Street, Peoria 1, Illinois

For more details circle NED-2577 on enclosed inquiry slip

HOW TO SELECT THE *RIGHT* MOTOR AND CONTROL FOR YOUR JOB

Name your motor and control need . . . a-c or d-c, from 1 to 700 hp . . . this book has the answers! Gives requirements to consider before selection. Features comprehensive chart, teaming the right motor and control to the right job.

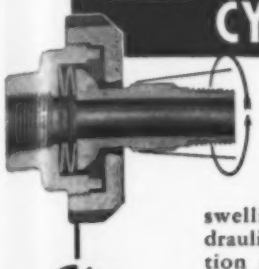
Introduces Westinghouse motor and control features—tells what they mean to you . . . shows modifications and accessories available and explains how they add life and versatility. It's a valuable selection guide with a storehouse of facts. Write for free booklet, Motor and Control Selector Guide, B-5458, Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania.

J-21687

YOU CAN BE SURE... IF IT'S **Westinghouse** MOTORS and CONTROLS

For more details circle NED-2578 on enclosed inquiry slip

Where HYDRAULIC CYLINDERS Move



KUX MACHINE CO.,
Chicago, says—

"HERE'S why we use BARCO SWIVEL JOINTS: (1) Unequalled safety, (2) No swelling or leakage under high hydraulic pressure, (3) Complete absorption of shock and vibration," says Kux Machine Co., Chicago maker of an outstanding line of die casting machines. Other advantages offered by Barco include smooth, easy action—NO BINDING; LEAKPROOF! *For the complete story, write today.* BARCO MANUFACTURING CO., 1830D Winnemac Ave., Chicago 40, Illinois.

Use **BARCO SWIVEL JOINTS**

Kux Die Casting Machine

▲ For more details circle **NED-2579** on enclosed inquiry slip ▲

SO SIMPLE...

KESTER FLUX-CORE SOLDER

So Simple . . . to end your soldering troubles with Kester's flux control (different core sizes) plus the wide selection of Flux-Core Solders in many wire sizes ranging from .009" to ¼-inch.

Kester also provides Field Engineering Service.

Free Technical Manual. Send for your copy of "SOLDER and Soldering Technique" today.

KESTER SOLDER COMPANY
4249 Wrightwood Ave., Chicago 39
Newark 5, New Jersey • Brantford, Canada

KESTER SOLDER

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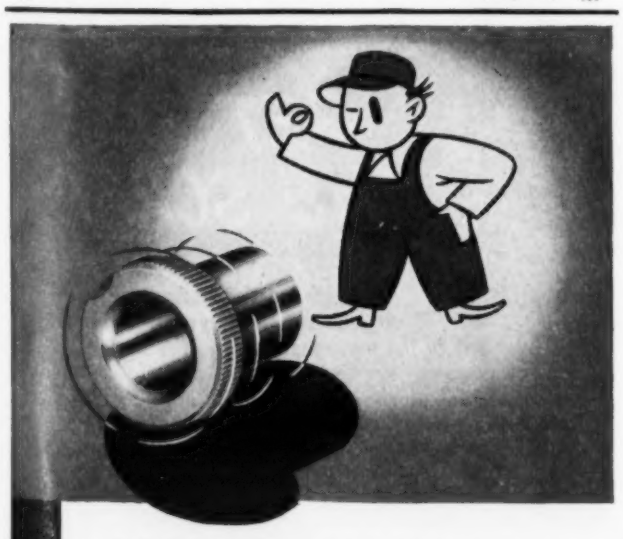


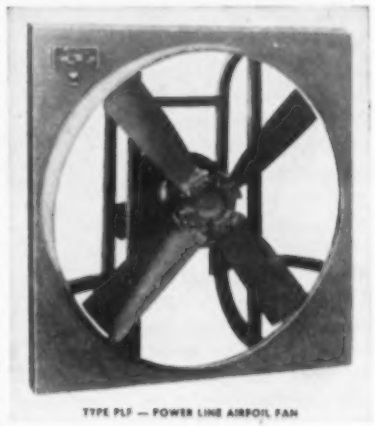
100% CONCENTRICITY AND HARDNESS TESTS ASSURE ACCURACY— SUPERFINISH BORES ASSURE LONG LIFE OF UNIVERSAL DRILL BUSHINGS

153-A

UNIVERSAL ENGINEERING COMPANY
FRANKENMUTH 5, MICHIGAN

▲ For more details circle **NED-2581** on enclosed inquiry slip ▲

EXHAUST & PRESSURE FAN for use against static pressure



TYPE PLF — POWER LINE AIRFOIL FAN

Heavy-duty type PFL direct drive fan finds application in industrial plants, duct work, mine exhaust systems and filtering units where large volumes of air are needed under static pressure. Propellers are nonoverloading, cast aluminum airfoil type, and motors are totally enclosed and ball bearing. Units are available in sizes from 16 to 48 in. with air deliveries from 2900 to 37,000 cfm. Made by **Chelsea Fan & Blower Co.,** Dept. NED-1, 639 South Ave., Plainfield, N. J.

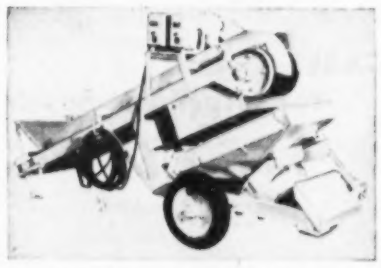
▲ For more details circle **NED-2582** on enclosed inquiry slip ▲

OXYGEN INDICATOR checks industrial atmospheres

Simple in design and easy to operate, C-2 oxygen indicator measures the oxygen content of inert and combustible atmospheres accurately within 2 per cent of selected scale range. Instrument is available with full-scale ranges of 0-1, 0.5, 0-10 and 0-25 per cent oxygen content. Only elements requiring maintenance are carbon electrode which is replaced periodically, detector cell which requires an ounce or two of oxylite every 2 weeks and No. 2 flashlight cell which must be replaced every week. Meter reads directly in per cent. Made by **Mine Safety Appliances Co.,** 220 N. Braddock Ave., Pittsburgh 8, Pa.

▲ For more details circle **NED-2583** on enclosed inquiry slip ▲

SAND PREPARATION MACHINE two sizes are shovel loading type

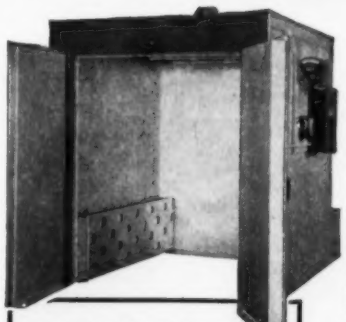


Foundrymen can now have screened, magnetically separated and fully aerated sand whenever necessary, anywhere in the foundry with the Magnarator portable sand conditioning machine designed for small and medium size foundries. Good balance and rubber-tired wheels facilitate easy movement of machine to different floor levels. Sand conditioner is designed for shovel loading and is built in two sizes with capacities of 20 and 30 tons of sand per hour. Made by **Pettibone Mulliken Corp.,** Beardsley & Piper Div., Dept. NED, 2424 N. Cicero Ave., Chicago 39, Ill.

▲ For more details circle **NED-2584** on enclosed inquiry slip ▲

"Any Way You Figure"

Up to 50% Faster Baking



Despatch OVENS

There's a Despatch Finish Baking Oven to meet the needs of both large factories and small shops. Wide range of uses includes aging, preheating, drying and curing. Ideal for baking insulating varnish on armatures . . . film surfaces of lacquer and enamel . . . wrinkle finishes on metal parts . . . hundreds of other baking operations. 12 to 240 cu. ft. capacities.

- **Fast finish baking of mass production parts, or for repair service . . .**
- **Vertical and horizontal forced air circulation prevents over or under baking . . .**
- **Gas or electric operated . . . wide range of sizes . . . factory tested . . . shipped assembled . . ready for operation.**

Write for Bulletins on RS Ovens and Trucks

Manufacturers of ovens for paint finishing . . dehydrating . . curing . . all industrial and laboratory applications.

DESPATCH Established OVEN CO in 1902

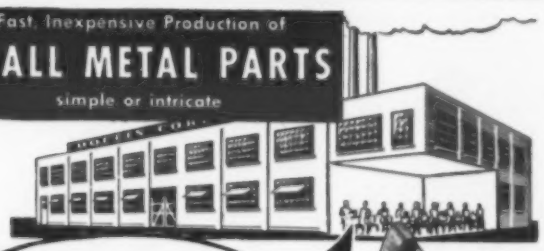
325 DESPATCH BUILDING MINNEAPOLIS 14, MINNESOTA

▲ For more details circle **NED-2585** on enclosed inquiry slip ▲

Fast, Inexpensive Production of

SMALL METAL PARTS

simple or intricate



DIE CAST in DOLLIN's SMALL CASTINGS DEP'T.

SMALL ZINC DIE CASTINGS 1000 per lb. to 3 per lb.*

GET completely trimmed, "ready-made" small parts quickly, at low cost! Our high speed automatic die casting machines permit greater intricacy, super-fast production. Tooling costs and piece prices are low, costly machining and assembly operations are often *eliminated*. So check with Dollin for possible savings on present or projected requirements! Defense order subcontracting, commercial orders.

Write For Bulletin and Samples or Send Prints for Quotation

*Approx. range for Small Castings Dep't.

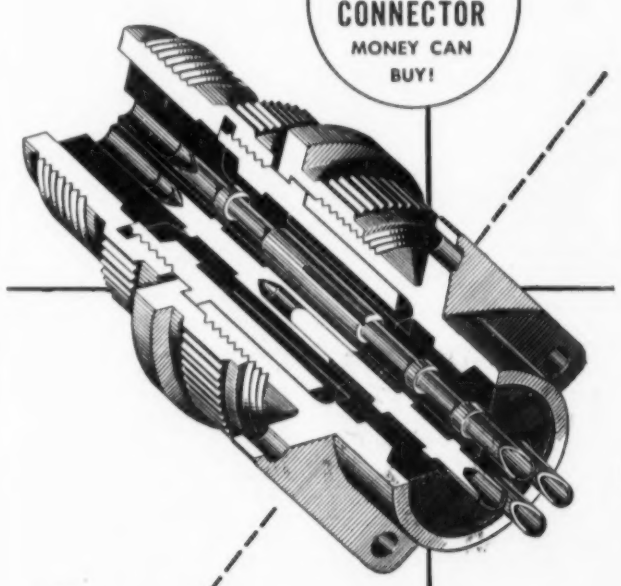
ACTUAL SIZE

DOLLIN CORPORATION { Zinc & Aluminum Die Castings of All Commercial Sizes

612 South 21st Street, Irvington 11, New Jersey

▲ For more details circle **NED-2586** on enclosed inquiry slip ▲

The Finest **ELECTRICAL CONNECTOR MONEY CAN BUY!**



SCINFLEX

ASSURES YOU THE LOWEST VOLTAGE DROP IN THE INDUSTRY!

When operating conditions demand an electrical connector that will stand up under the most rugged requirements, always choose Bendix Scinflex Electrical Connectors. The insert material, an exclusive Bendix development, is one of our contributions to the electrical connector industry. The dielectric strength remains well above requirements within the temperature range of −67°F to +275°F. It makes possible a design increasing resistance to flashover and creepage. It withstands maximum conditions of current and voltage without breakdown. But that is only part of the story. It's also the reason why they are vibration-proof and moisture-proof. So, naturally, it pays to specify Bendix Scinflex Connectors and get this extra protection. Our sales department will be glad to furnish complete information on request.

• Moisture-Proof • Radio Quiet • Single Piece Inserts • Vibration-Proof • Light Weight • High Insulation Resistance • High Resistance to Fuels and Oils • Fungus Resistant • Easy Assembly and Disassembly • Fewer Parts than any other Connector • No additional solder required.

BENDIX SCINFLEX
ELECTRICAL CONNECTORS

Bendix

SCINTILLA MAGNETO DIVISION of SIDNEY, NEW YORK

Bendix AVIATION CORPORATION

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.

FACTORY BRANCH OFFICES: 118 E. Providencia Ave., Burbank, Calif. • Stephenson Bldg., 6560 Cass Ave., Detroit 2, Michigan • Brouwer Bldg., 176 W. Wisconsin Avenue, Milwaukee, Wisconsin • 582 Market Street, San Francisco 4, California

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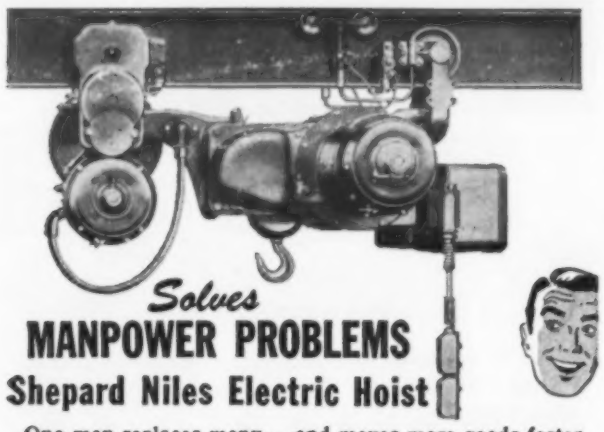


Solves
MANPOWER PROBLEMS
Shepard Niles Electric Hoist

One man replaces many — and moves more goods faster — with a Shepard Niles Electric Hoist. These sturdy hoists free valuable floor space, put waste ceiling area to work, enable an older man, woman or youth to handle the heaviest loads with ease.

Learn how a Shepard Niles Hoist — in light, medium or heavy capacity — fits into your production picture. Call in the Shepard Niles representative — he'll make sure you get the right capacity and controls for your handling job. Write today for Bulletins 127 and 171 and ask to have a representative stop by.

- **HOISTS** Operated from Cab, Floor or Pulpit.
- **CRANES** Overhead: Top Running, Inner Running, Under Running, Floor or Cab Operated.

Specialists in loads through-the-air since 1903.

SHEPARD NILES
CRANE AND HOIST CORPORATION
1815 SCHUYLER AVENUE • MONTOUR FALLS, N. Y.

For more details circle NED-2588 on enclosed inquiry slip

UNIVERSAL
EXPANDED METAL **FLOOR TRUCKS**

MODEL 4-A
Length 60", width 30", height 30".

- **Greater Economy**
- **Greater Utility**

Literature Mailed Promptly Upon Request

MODEL 4-B
Length 60", width 30", height 48".

Durable, highly maneuverable, economically priced. Designed to meet a wide range of material handling jobs. Rigid angle iron frame. Equipped with four 4" ball-bearing fiber casters —swivel casters centered at front and rear; rigid casters centered on each side. Model 4-B has hinged drop panel on side equipped with positive safety latches.

- Also other types of expanded metal containers in sizes and quantites to customer's specifications.

INDUSTRIAL ENGINEERING & MFG. CO., INC.
BRIMFIELD, INDIANA, U.S.A.

For more details circle NED-2589 on enclosed inquiry slip

VALET RACKS

LOCKERETTE
—Combines the best features of both lockers and coat racks

Improves health and morale —lowers absenteeism

Wraps are exposed to air and light. Employees do not face the weather in damp wraps that have been crumpled in dark lockers—do not eat soggy lunches, soaked by wet hats or gloves. Each person has his own spaced coat hanger, ventilated hat shelf and 12" x 12" x 15" deep lock box for lunches, tools and personal effects.

Lockerettes save space too . . . the No. 6-12 (2-column) accommodates 12 people in 6 ft; the No. 9-18 (illustrated) accommodates 18 in 9 feet.

Write for Bulletin No. OL 8

VOGEL - PETERSON CO.
624 So. Michigan Ave., Chicago 5, Ill.

For more details circle NED-2590 on enclosed inquiry slip

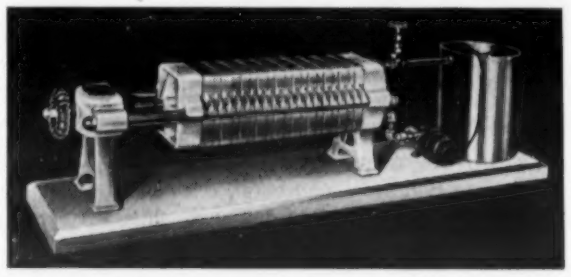
HYDRAULIC PIERCING UNITS
have automatic stripping action

Compact and completely hydraulic in action, line of portable piercing units incorporates automatic stripping action. One model weighs 45 lb, yet exerts force of 5 tons at 2000 psi working pressure. Maximum capacity is 12½ tons at 5000 psi. Riveting, trimming, bending or extruding, as well as piercing, are among operations which can be performed. Rigidity of construction permits piercing holes in some cases smaller in diameter than material thickness. Made by **Danly Machine Specialties, Inc.**, 2100 S. Laramie Ave., Chicago 50, Ill.

For more details circle NED-2591 on enclosed inquiry slip

LABORATORY FILTER
for pilot-plant or testing uses

Virtually all liquids can be handled by this laboratory filter which is designed for precise control of filtering operations. Filtering cycles and rate of filter cake formation can be determined precisely. Aluminum construction is used, and 6 x 6-in. frames are of noncorroding aluminum alloy exactly proportioned to full-scale production models. Slurry tank is equipped with motor driven pump and all equipment is mounted on base. Made by **Valley Foundry & Machine Works, Inc.**, 2718 East Ave. at Highway 99, Fresno, Calif.



For more details circle NED-2592 on enclosed inquiry slip

CABLE CLAMP
for suspending bus-drop cables

Bus-drop cables used without conduit as simplified means of transmitting power to machine tools can be effectively suspended above machine with Sky-Tie quarter-bend cable supporting clamp. Fitting also anchors cable at busway and at machine. Device consists of two identical pieces joined by heavy bolts which are merely tightened with support in position. Spring, which fits onto clamp tangentially to its bend, keeps cables tight and absorbs vibration and shocks to the installation. It supports loads as high as 125 lb. Made by **Adalet Mfg. Co.**, 14314 Lorain Ave., Cleveland 11, O.

For more details circle NED-2593 on enclosed inquiry slip

LABORATORY STIRRER
has three predetermined speeds

Speeds of 300, 600 and 900 rpm, suited for general laboratory stirring, are preselected by knob on Mighty Midget No. 3-6-9 stirrer. The 1/16-hp motor is series wound and pulls 65 w. Underwriters' Laboratories approved unit has mounting bracket which permits mounting in any position. In normal position, center of gravity is below support rod, this preventing accidental turnovers and beaker breakage. Unit can be mounted by sliding on rod or hooking on without disturbing any setup. Stirrer is offered with three-jaw chuck, two-position mounting bracket, 8-ft rubber covered cord and plug and 8-in. aluminum support rod. Chuck holds stirring rods of ¼-in. diameter. Units are available for operation on 115 v ac-dc and 230 v ac-dc. Made by **Laboratory Industries, Inc.**, 4708 W. North Ave., Chicago 39, Ill.

For more details circle NED-2594 on enclosed inquiry slip

SIGNODE RETAINING STRIPS

Signode Retaining Strips are easily applied. They are economical . . . one or two strips may be all you need for adequate protection. Because they can be split at the center and draped back out of the way, Signode Retaining Strips permit walk-in and through-car loading, and the use of lift trucks and dollies in the cars. Ends are quickly joined, tensioned and sealed. These strips are made of heavy kraft paper reinforced, top and bottom, with strong Signode steel strapping. They reduce dunnage weight, end need for doorway liners, and prevent damage through doorway jamming. For details write,

SIGNODE STEEL STRAPPING CO.
2643 N. Western Ave., Chicago 47, Ill.

THIS SEAL MEANS SIGNODE SECURITY IN SHIPPING

For more details circle NED-2595 on enclosed inquiry slip

PURE WATER
DISTILLED WATER?
PROBLEMS SOLVED WITH *Barnstead* EQUIPMENT
DEMINERALIZED WATER?

In hundreds of manufacturing processes, where complete purity is needed, Barnstead Stills provide the highest-quality, lowest-cost, chemically pure, sterile water from ½ to 1000 gallons per hour. With over 100 different models to choose from, Barnstead can provide the exact still to fit your particular needs. For Barnstead Laboratory and Industrial stills are the proven standard of the scientific and industrial world.

Where modern manufacturing processes require only high-test mineral-free water, Barnstead Demineralizers are the best producers . . . 5c per 1000 gallons with a minimum of supervision and maintenance. Many new industries are turning to Barnstead Demineralized Water for greater production, fewer rejects and better quality control.

WRITE

Catalog #123 gives both sides of the Pure Water Picture. Since Barnstead makes both stills and demineralizers, you'll find this catalog complete, authoritative, unbiased. Write Today!

First in Pure Water since 1878

Barnstead STILL & STERILIZER CO.
16 Lanesville Terrace, Forest Hills, Boston 31, Mass.

For more details circle NED-2596 on enclosed inquiry slip

GET IN THE SCRAP

Send for this new booklet —it tells how you can help out in the emergency facing the nation.

Many thousands of manufacturing plants now face serious shortages of steel and products made of steel.

Unless the steel mills and foundries get more *scrap* iron and steel, it will be impossible to meet current demands for both military and civilian production.

You have the needed scrap—in the form of "idle" iron and steel: obsolete machinery, no-longer-usable jigs and fixtures, chain, gears, pulleys, pipe, etc.

Set up a Scrap Salvage Program in your plant* and help keep the steel coming! Non-ferrous scrap is needed, too!

SCRAPPY SAYS: AID DEFENSE MORE SCRAP TODAY... MORE STEEL TOMORROW

*For copy of "how-to-do-it" booklet, address Advertising Council, 25 W. 45 St., New York 19, N. Y.

NEW EQUIPMENT DIGEST

For more details circle NED-2597 on enclosed inquiry slip

"HET UP" about YOUR wasteful heating SET UP? change to THERMOLIER UNIT HEATERS

Thermoliers provide quick heating from a cold start. Desired room temperatures are easily maintained within a close range. Moreover, heat is forced down to the working level . . . not banked uselessly at the ceiling. The units and the simple piping are overhead where they do not interfere with arrangement of the operating machinery or equipment. Write for Thermolier Catalog.

GRINNELL
THERMOLIER UNIT HEATERS
Grinnell Company, Inc., Providence, R. I.
Coast-to-coast Network of Branch Warehouses and Distributors
For more details circle NED-2598 on enclosed inquiry slip

WHY "sweat it out?"

WHEN Conveyors will move it faster...cheaper

How many material handling jobs are you still doing the hard way? How many precious man hours, dollars and minutes are you spending to move materials from here to there?

Whether it's bags, boxes, barrels, bales or bulk . . . whether it's unloading, loading, transporting, lifting or lowering, chances are that a Lippmann Conveyor or combination of them will show substantial savings in time, men and money.

Lippmann is headquarters for all kinds of conveyors, and 28 years of manufacturing and application experience. Lippmann engineers are ready and eager to help you solve your material handling problems. A card or letter will bring prompt and sincere attention to your regular or special requirements.

LEW LIPPMANN ENGINEERING WORKS
4631 W. Mitchell St., Milwaukee 14, Wisconsin
For more details circle NED-2599 on enclosed inquiry slip

Mighty Midget of the Service World

Mighty Midget of all the V-O-M's! Slips into your pocket for making spot-analyses of D.C. and A.C. Voltage, Current, and Resistance. Has quick-reading scale, only one switch, 50" leads—alligator clips, banana-type jacks, self-contained snap-in type batteries, and plenty of ranges on the one-knob 14-position switch. Remarkable stability on voltage ranges. Completely insulated molded case. Get yours today! Triplett Electrical Instrument Co. • Bluffton, Ohio, U.S.A.

FOR THE MAN WHO TAKES PRIDE IN HIS WORK
Triplett

Model 666-HH
Volt-Ohm-Milliammeter
ONLY $24.50 AT YOUR DISTRIBUTOR
(Price Subject to Change)

For more details circle NED-2600 on enclosed inquiry slip

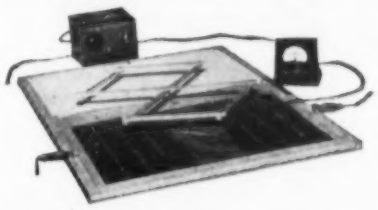
HELIUM ARC developed for contour welding

High quality contour welds can be made in sheet metal assemblies at speeds up to 100 ipm with Heliarc HWM-1 semiautomatic welder. Equipment retains flexibility of manual operation, but adds advantages of mechanized welding, such as uniformity of speed, arc length and weld deposit. Torch employs filler rod which is fed automatically by electrically powered drive rolls through flexible conduit into tungsten arc. Driven filler rod not only serves as weld metal, but also provides propelling force which moves torch when rod is kept in contact with work. Operator merely strikes an arc, pulls trigger to start filler rod feeding and steers moving torch over line of weld. Plain carbon and stainless steels in thickness range from 0.020 to 0.125-in. can be welded. Made by **Linde Air Products Co.**, Room 308-NED, 30 E. 42nd St., New York 17, N. Y.

For more details circle NED-2601 on enclosed inquiry slip

ANALOG FIELD PLOTTER for rapid solution of complex two dimensional field problems

Industrial and classroom study of electrostatic field problems, determination of magnetic flux distribution and intensity, and charting of current flow and temperature distribution in conductors are among uses of Analog field plotter. It consists of plotting board and exploratory stylus, direct current power supply operated from 115 v ac, multiturn voltage divider, sensitive microammeter, conducting paper and silver paint.



Plotter sets up electrical field patterns in thin conducting-paper surface on plotting board. Analogy between electric field in paper and related field problems can thus be established. Instrument can also be applied in study of air flow patterns around wing and propeller designs, fluid flow and velocity gradients in steam and gas turbine blade grid assemblies, electrode shapes in vacuum and thyratron tubes and field patterns in wave guides and electron lenses. Made by **General Electric Co.**, Special Products Div., Schenectady 5, N. Y.

For more details circle NED-2602 on enclosed inquiry slip

DO YOU KNOW? Airfield runways and taxi strips "softened" by jet fuel spillage can be protected with a coating of Aurfa-Aero-Sealz plasticized synthetic rubber and tar blend. Compound is mixed with selected tar cement in the hot-melt stage. When laid, it withstands searing jet blasts, high wheel loads and gives relatively nonskid surface. Developed by United States Rubber Co., Naugatuck Chemical Div., Naugatuck, Conn.

For more details circle NED-2603 on enclosed inquiry slip

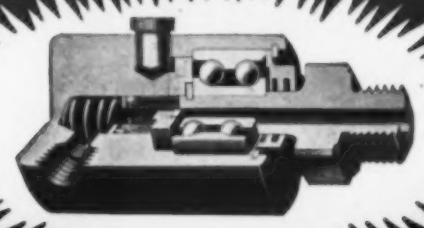
just SAW that's all! WITH THE KETT PANEL CUTTING SAW

• SAVE TIME---SAVE MONEY
• NO DRILLING---NO FILING---NO DEBURRING

Just "plunge" right in and cut . . . everything from cardboard to steel. Follow curves or contours . . . zip through the toughest cutting jobs quicker and easier. Typical capacities: 12 ga. steel, 3/16 in. aluminum, 1/4 in. masonite, plywood, Amor Ply, and plastics. Interchangeable heads permit capacities up to 1/2 in. in soft rigid materials. A variety of blades for hard tempered or soft aluminum, copper, brass, lead, cast iron, etc., are available. Your present electric or pneumatic drill motor may be used for the power unit. Write for Catalog E-3 showing time-saving KETT tools.

The KETT TOOL COMPANY
5 East Third St., Cincinnati 2, Ohio
For more details circle NED-2604 on enclosed inquiry slip

FAWICK ROTORSEALS Performance Proved in THOUSANDS OF INSTALLATIONS



Machine problems requiring transmission of air or liquids from stationary to rotating machine members are best solved with FAWICK ROTORSEALS.

Precision ROTORSEALS are available in single and multiple passage units, insuring dependable sealing of air, liquids or gases under pressure. They are equally effective in vacuum applications and may be operated continuously or intermittently in either direction.

FAWICK AIRFLEX CO., INC.
9919 CLINTON ROAD • CLEVELAND 11, OHIO

For complete information on a FAWICK ROTORSEAL to suit your specific application, write to the Home Office, Cleveland, Ohio.

FAWICK Airflex
INDUSTRIAL CLUTCHES AND BRAKES

For more details circle NED-2605 on enclosed inquiry slip

How to Save Time and Money On Hog Ring Fastening

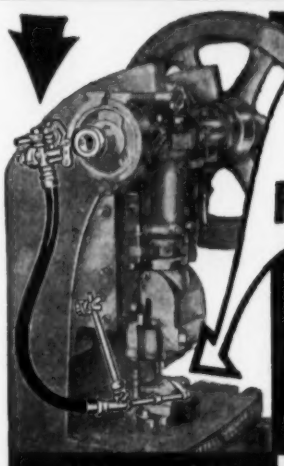
Use this improved self-feeding Bostitch P7 Hog Ring Plier to:

- ✓ fasten fabric to wire frames
- ✓ join loose wires into neat assemblies
- ✓ bind ends of ropes, cords, wires
- ✓ seal twisted necks of plastic bags

Bostitch P7 hog-ring-type staplers are stronger, more powerful than ever. One-hand operation easily forms sturdy staples into "hog rings." Staples have 1/2" openings . . . can be compressed to rings with a 1/4" diameter. Rings resist about a 20-pound pull without opening. Bostitch P7 stapling pliers are first choice of automobile seat cover installers, mattress makers. You'll find them quicker and easier than tying, winding, wrapping, wiring, taping. Write for PTG232 data sheet for more details on this time-saving, cost-cutting method. BOSTITCH, 734 Mechanic St., Westerly, R. I.

BOSTITCH® fastens it better AND FASTER with wire
ALL TYPES OF MACHINES FOR APPLYING STAPLES
ALL TYPES OF STAPLES APPLIED BY MACHINES

For more details circle NED-2606 on enclosed inquiry slip



keep HANDS and FINGERS away from PRESS RAM

LITTELL Air Blast Valves Eject Automatically by Air . . . not by Hand

SAVE TIME . . .	. . Faster production and lower labor costs
SAVE AIR . . .	. . Reduce air consumption 92 percent
SAVE DIES . . .	. . No damage to dies due to clogging
SAVE HANDS . . .	. . Keep operators' hands and fingers out of danger zone
SAVE MONEY . . .	. . Insurance premiums are lower when accidents are reduced.

QUICKLY INSTALLED—Littell Air Blast Valves can be installed on any make or size press in only a few minutes.

F. J. Littell MACHINE CO. AIR DIVISION
4169 RAVENSWOOD AVE., CHICAGO 13, ILL.
— District Offices: Detroit and Cleveland —

Write for Catalog

For more details circle NED-2607 on enclosed inquiry slip

MOVE stubborn materials with TABOR PNEUMATIC VIBRATORS

Save damage to bins, chutes and hoppers. Save man-hours spent in banging, poking and rodding. *Reliable, durable* Tabor Vibrators keep all types of granular materials from arching and plugging—keep production on its free-flowing way. Tabor means *reliable.* Unique porting insures *instant, full-power start* and rapid powerful blows. Tabor means *durable.* Self-oiling at each stroke. Drop-forged, non-distorting body. Hardened steel pistons, precision-lapped to close cylinder tolerance. Tabor means long-life *quality,* and there's no substitute for that. Your inquiries are invited.

THE TABOR MANUFACTURING CO.
6227 TACONY STREET, PHILADELPHIA 35, PA.

For more details circle NED-2608 on enclosed inquiry slip

LEAKY PIPE JOINTS? SEAL 'EM WITH Plasgon

Pipe joints sealed with Plasgon *can't* leak. Because Plasgon — the *flexible* pipe joint cement — *stays* flexible. Constant jars and shocks won't loosen Plasgon. Proof against all common solvents . . . oil, gasoline, kerosene, steam, water. Stands heat up to 350° F . . . resists considerable pressure.

Plasgon forms gaskets too . . . quick and easy to use . . . just squeeze it out of the tube.

Write Today for *Free Sample* of Plasgon and complete information.

Samuel Cabot, Inc.
332 Oliver Bldg., Boston 9, Mass.

For more details circle NED-2609 on enclosed inquiry slip

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CHOOSE THE
AIR VALVE YOU HELPED DESIGN

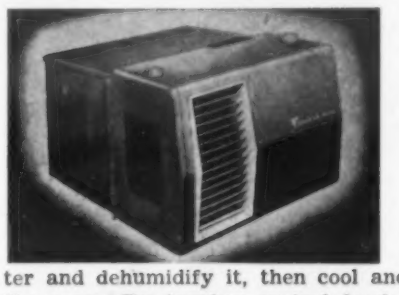
Best for Trigger-Quick Control of All Air Operated Equipment
• FULL FLOW • COMPACT • ONE MOVING PART

Send for FREE Catalog

MAC MECHANICAL AIR CONTROLS, INC.
15313 W. 11 MILE RD. • ROYAL OAK, MICHIGAN

For more details circle NED-2610 on enclosed inquiry slip

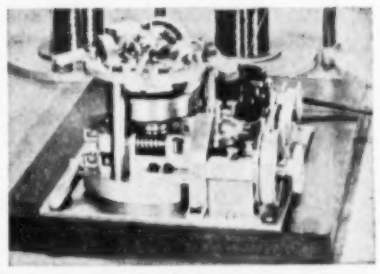
ROOM AIR CONDITIONER
½ and ¾-ton units available



Designed for installation in windows, ½-ton capacity model 712 and ¾-ton capacity model 734 are for conditioning of air in single rooms only. Both draw fresh air in from outside, filter and dehumidify it, then cool and circulate it around the room. By turning control knob, baffle arrangement directs air straight out of front or side, or both front and side at same time. This precludes occupants of room being in path of cooled air stream. Made by **Fresh'nd-Aire Co.,** Dept. NED, 221 N. La Salle St., Chicago 1, Ill.

For more details circle NED-2611 on enclosed inquiry slip

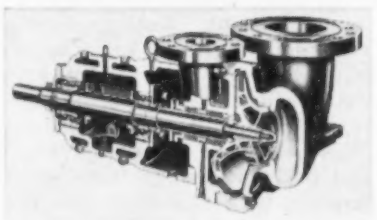
THREE-POLE ARMATURE WINDER
winds 200 turns per pole in 16 sec.



Compact model 33-A armature winder is capable of winding three poles simultaneously in uniform layers at speed of 200 turns in 16 seconds. Winder is foot-pedal controlled and operates at constant speed. Automatic stop relieves operator of necessity of observing count. Wire as fine as No. 38 and heavy as No. 25 can be wound, and in case of wire breakage, manual tripping lever will stop machine. Other features include quick-acting lever-controlled collet and spring loaded armature positioning pin. Made by **Geo. Stevens Mfg. Co.,** 6024 N. Rogers Ave., Chicago 30, Ill.

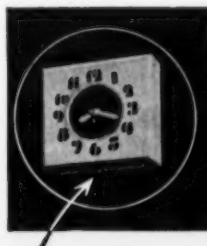
For more details circle NED-2612 on enclosed inquiry slip

PROCESS PUMP
capacities range up to 1000 gpm



Petroleum hydrocarbons, water and chemical solutions at temperatures up to 850° F can be pumped with type PR process pump. Capacities up to 1000 gpm and operating heads to 625 ft are available. Horizontal electric motor drive is standard, but turbine, stationary engine and other drives are available. Liquid end can be cast iron, bronze, steel, stainless or other materials to meet needs of application. Top suction-top discharge and end suction-top discharge models are offered. Additional features include water-cooled stuffing box, removable throat bushing, by-pass lantern and quench type packing gland. Rotating parts can be removed without disturbing piping or driver. Made by **Food Machinery & Chemical Corp.,** Peerless Pump Div., 301 West Ave. 26, Los Angeles 31, Calif.

For more details circle NED-2613 on enclosed inquiry slip



TELECHRON
DEPARTMENT OF GENERAL ELECTRIC CO.
UPS PRODUCTION 30% ON THIS PRECISION WELDING JOB...*with*

RAYTHEON

WELDPOWER* UNITS

Savings realized with Raytheon WELDPOWER* Units grow big as millions of these small nickel plated steel gears and shafts are welded annually. Replacing conventional welding methods, Raytheon WELDPOWER* does a better job on Telechron Electric Clocks . . . assemblies are clean, strong and precise to meet their unusually high standards of quality production . . . rejects are greatly reduced.

Raytheon Condenser WELDPOWER* Control Units are available in 3 sizes with appropriate Weldpower Heads. Send us your sample parts and production requirements, or write for complete information. Address Dept. 6470 NE-3

*Reg. U. S. Pat. Off.

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For more details circle NED-2614 on enclosed inquiry slip

REPUBLIC RUBBER PAVES WAY FOR ELIMINATION OF INDUSTRIAL RUBBER SUPPLY PROBLEMS

BELTING, HOSE, MOLDED & EXTRUDED SHAPES LATHE OR DIE CUT SPECIALTIES . . .

Biggest impact from record-breaking defense spending is yet to hit. All industries will feel increased pressures during 1952.

Maintenance and production requirements involving Industrial Rubber Products should be considered immediately since postponements may cause future delivery delays.

Let Republic Rubber help analyze your needs now . . . aid your planning to assure safe, adequate supplies.

Complete engineering services . . . on-the-spot estimates . . . available to help you develop bids, smooth out production wrinkles.

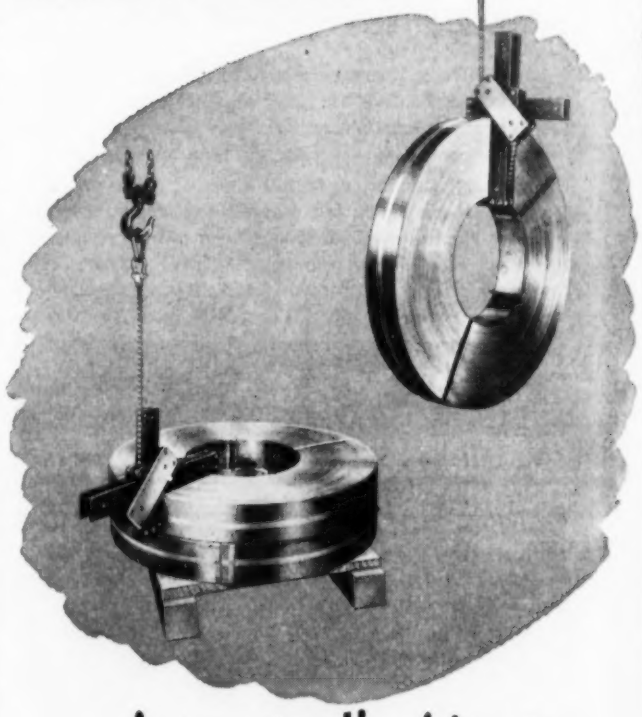
Remember, Republic Rubber has been the specialist in the field of Industrial Rubber for more than 50 years. Write, phone or wire today. Address: Republic Rubber Division, Youngstown, Ohio. Phone 3-2131.

For more details circle NED-2615 on enclosed inquiry slip

DIXON

One Man Coil Grab

2000 LB. CAPACITY



Automatically Adjusts to Coil Size!

Coils can now be lifted from the pallet to a vertical position in one easy motion. A tapered prong fits between the coils in the space made by the coil bands. The opposite jaw is placed in the center of the coil. As the crane lifts the Dixon Grab automatically adjusts to the width, outside and inside dimensions of the coil and locks by its own weight as illustrated.

The Dixon Grab handles coils up to 2,000 lbs. The maximum opening is 15" from the I.D. to O.D. of the coil. It will handle coils up to 9¼" in width. Larger sizes are available on special order. See your dealer or write direct for full price information and catalog sheets.

Dealer Inquiries are Invited

MATERIALS HANDLING DIVISION
DIXON RESEARCH INC.
2300 23rd AVE. • ROCKFORD, ILL.

For more details circle NED-2616 on enclosed inquiry slip

Check THESE PRICES

Buy Metal Baskets direct and save money

Basket 764 Degreasing 14" x 14" x 8" $4.90 Each

Basket 761 Degreasing 12" x 10" x 8" $6.40 Each

Prices F.O.B. York

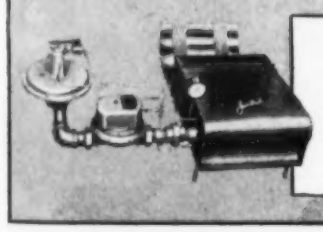
Here are prices on only two of our many degreasing, parts cleaning, heat treating and materials handling baskets. Write for specifications on our full line—also for our money-saving, factory-to-you prices — no obligation.

HOFFMAN COMPANY
41-43 N. PENN ST., YORK, PA.

For more details circle NED-2617 on enclosed inquiry slip

FOR EASIER CONVERSIONS gas THE NEW, COMPLETE FACTORY ASSEMBLED

Janitrol
MODEL SC-05



TWO UNITS, 325,000 TO 750,000 BTU PER HOUR

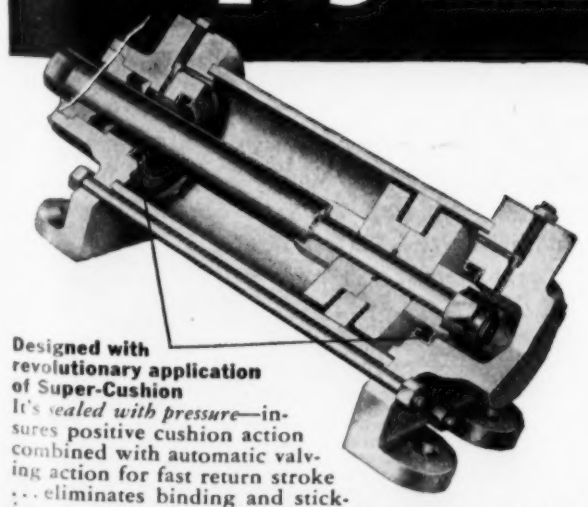
Among the many design features of the new Janitrol Conversion Burners simpler installation and full accessibility are most important for industrial applications. Optional equipment includes instantaneous flame failure protection with complete control panel to meet the requirements of gas utilities, city, underwriters and insurance companies.

Write today for complete specifications and performance data.

SURFACE COMBUSTION CORPORATION • DEPT. H, TOLEDO, OHIO

For more details circle NED-2618 on enclosed inquiry slip

New Flexible Sealing T-J AIR CYLINDER



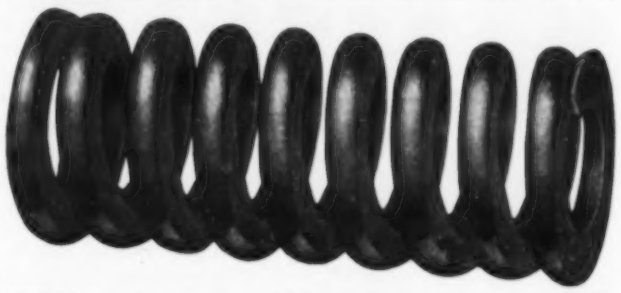
Designed with revolutionary application of Super-Cushion
It's *sealed with pressure*—insures positive cushion action combined with automatic valving action for fast return stroke . . . eliminates binding and sticking . . . operates with *low friction, minimum wear,* and *added power* due to higher efficiency. Many more plus features! Wide range of styles and capacities. Write for bulletin 252. The Tomkins-Johnson Co., Jackson, Mich.

36 YEARS' EXPERIENCE T-J
TOMKINS-JOHNSON
VALVES · AIR AND HYDRAULIC CYLINDERS · CUTTERS · CLINCHERS

For more details circle NED-2619 on enclosed inquiry slip

HIGH PRESSURE SPRINGS for ¾ to 2-in. hole diameters

Designed for all die applications and general machinery use, line of stock high pressure springs is available for hole diameters from ¾ to 2 in. and for use over 21/64 to



15/16-in. rods. Drawn, high carbon, oval wire permits deflection of about 30 per cent where maximum load rate and normal movement are required. Free lengths are cut to exact lengths from 1½ to 12 in. with ends closed and ground square. Springs withstand maximum pressures from 400 to 2000 lb. Made by **Producto Machine Co.,** 965 Housatonic Ave., Bridgeport 1, Conn.

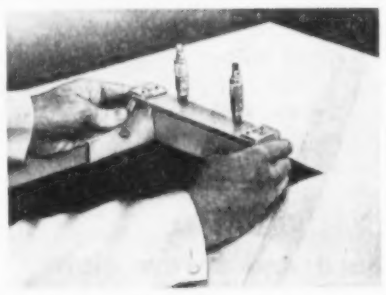
For more details circle NED-2620 on enclosed inquiry slip

FAST-DRYING PRIMER for hard-to-finish materials

Polished chrome, stainless steel, zinc, glass and other hard-to-finish materials can be given protective coatings after application of VB 282 fast-drying black universal primer. Vinyl plastic-base material also adheres to aluminum, zinc plating and molded phenolics. Flexibility allows parts to be formed, extruded or blanked after finishing. Primer air dries in 15 minutes and has good resistance to salt spray, humidity, abrasion and solvents. Application is by dip or spray. Made by **United Lacquer Mfg. Corp.,** 1005 W. Elizabeth Ave., Linden, N. J.

For more details circle NED-2621 on enclosed inquiry slip

FILM CASTING KNIFE has micrometer blade adjustment

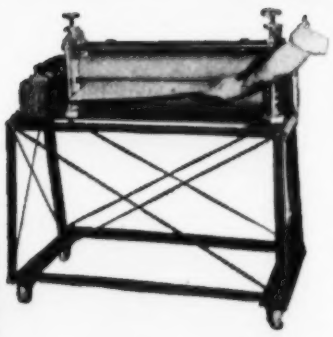


Films or protective coatings are applied in uniform thickness on plane surfaces with this film casting knife having double micrometer blade adjustment. Blade frame has two extended end sections which form paint well and afford suitable hand grip. Coating material is poured in front of blade onto plane surface to be covered. Knife is then drawn to other end of plane at uniform speed of 1 to 2 in. per second. Blade is retained in slots which allow vertical adjustment, and upward thrust against micrometer barrels is maintained by two spring members. Accurate gate setting clearances from 0 to ¼-in. can be made with micrometers in increments of 0.001-in. Made by **Henry A. Gardner Laboratory, Inc.,** 4724 Elm St., Bethesda 14, Md.

For more details circle NED-2622 on enclosed inquiry slip

60 years of dependable service

POTDEVIN



COMBINING MACHINE

A new, high-speed machine that combines glued materials up to ½ inch thick and 30 inches wide.

Designed for use either for hand feeding or set up in a production line. A safety switch is provided for separating the rubber covered rollers. Machine is mounted on a rigidly constructed steel frame, easily ported about on ball-bearing casters.

Other machines available from 24 to 48 inches wide or wider on special order. Machines for combining materials up to 1¼" are also available.

Write for literature on complete POTDEVIN line.

POTDEVIN MACHINE CO.
273 North St., Teterboro, N. J.

ESTABLISHED IN 1893 POTDEVIN

Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling.

For more details circle NED-2623 on enclosed inquiry slip

doing the unusual is *Routine* to us!

SEAMLESS RINGS AND BANDS

SPACERS

HEIGHT TOLERANCE −.000" to +.00025"

Just two of the many precise metal parts on which we have developed special techniques for economical production of your metal components.

Doing the unusual is ROUTINE to us

Send in your Blueprints for our quotation

RINGS & BANDS From ⅜" I.D. on up COPPER ALLOYS STEEL-ALUMINUM

For: Supporting, Retaining, Fastening

CARROLL PRESSED METAL CO.
138 DEWEY ST., WORCESTER, MASS.

OVER 48 YEARS OF PRECISION METAL FABRICATION

For more details circle NED-2624 on enclosed inquiry slip

MAINTENANCE MEN!

this book helps you get more from your chains and sprockets

Here's just what you're looking for to help you get longer life from your chain drives and conveyors. This new pocket-size handbook is packed with useful tips that are of real value.

There are chapters devoted to installation, lubrication, operation, repair and storage as well as a number of helpful sketches, charts and graphs. One novel feature is a detailed check chart on "Cures for Sick Chains." It's a book you'll want and keep, and it's yours for the asking. Send for your copy today.

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Gentlemen: Please send me ( ) copies of your Bulletin 51-7.

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Company.....Dept.....

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City.....State.....

For more details circle NED-2625 on enclosed inquiry slip

Whatever your spring wire requirements—consult with Seneca! Our production *geared to precision* in manufacturing oil tempered and hard drawn wire—round and flat—for all types of high grade mechanical springs. Seneca uniformity and dependability help the spring manufacturer produce high quality springs at low cost. Write . . . Seneca Wire & Mfg. Company, Fostoria, Ohio. Representatives in principal cities.

SENECA ROUND AND FLAT SPRING WIRE
WIRE & MFG. COMPANY · FOSTORIA, OHIO

▲ For more details circle NED-2626 on enclosed inquiry slip ▲

Grounds upkeep and maintenance problems are solved quickly, easily and BETTER when you use the powerful 5-HP Gravely Tractor! . . . 20 tools for year-round use with seasonally selected attachments, quick change from job to job in minutes! Only the Gravely does so many jobs so well!

All-Gear Drive, Power Reverse. Institutions-tested for 31 years . . . Ask for your copy of FREE Gravely catalog, "Power vs. Drudgery." Find out how you can do MORE jobs faster and better. Write today!

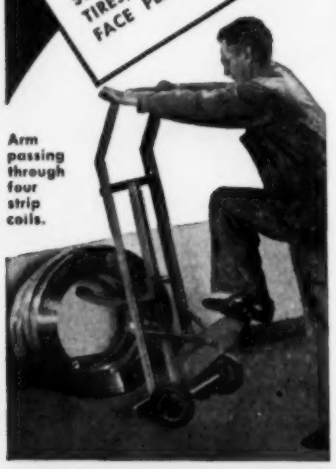
Gravely Motor Plow & Cultivator Co.
BOX 380 DUNBAR, WEST VIRGINIA

▲ For more details circle NED-2627 on enclosed inquiry slip ▲

Anything with a HOLE through it-

HANDLED FASTER and with less labor- by using **SABIN COILTRUCK**

ARTICLES SUCH AS STRIP COILS, WIRE COILS, BOX STRAPPING, WHEELS, TIRES, LATHE CHUCKS OR FACE PLATES, ETC.



Simply run truck up to article, passing arm through hole, then pull back on handle to pick up load. Third wheel feature minimizes trucking effort.

WRITE FOR BULLETIN

•

OTHER SABIN ONE MAN TRUCKS:

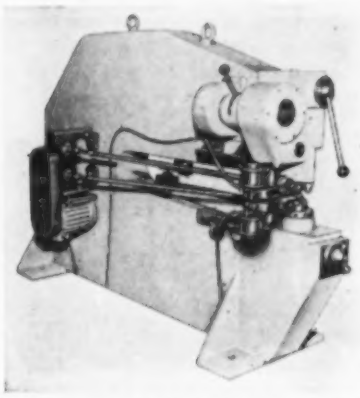
Barrel, Keg, Box and Package Trucks; Tote Pan, Carboy, Shop and Special Trucks.

Write for Bulletin No. 48-A

THE SABIN MACHINE CO.
6536 Carnegie Avenue
Cleveland 3, Ohio

▲ For more details circle NED-2628 on enclosed inquiry slip ▲

POWER FEED for sheet working machines

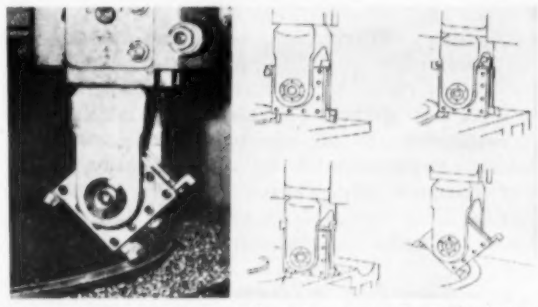


Designed to aid in cutting and working steel plate up to 11/32-in. thick, power feed for use on Pullmax Major, model P-5 and D-3 sheet working machines reduces manpower, speeds up cutting time and removes variables of vibration caused by hand feeding. Device will cut disks and circles on a production basis. Machines cut steel or other metals by reciprocating upper tool operating with stationary lower tool and can perform straight, circle and irregular cutting, inside or outside of metal. Made by **American Pullmax Co.**, 2457 N. Sheffield Ave., Chicago 14, Ill.

▲ For more details circle NED-2629 on enclosed inquiry slip ▲

EIGHT-POSITION TOOL HOLDER wrench adjustment changes position

Four tools can be mounted at once with positive position assured by two index pins on Davis 8-position tool holder designed for use on vertical boring and turning mills.



Holder, which requires only one wrench adjustment to change position through 360 degrees enables operator to turn, undercut, bore and chamfer in one setup. Position indexing is in increments of 45 degrees. Accuracy is assured by cast steel body of holder. Center pin locks assembly in rigid alignment and clamps it solidly. Made by **Giddings & Lewis Machine Tool Co.**, Davis Boring Tool Div., Dept. RB, 140 Doty St., Fond du Lac, Wis.

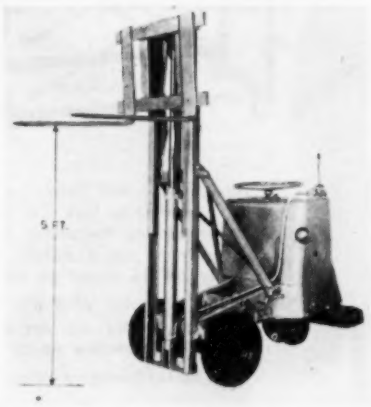
▲ For more details circle NED-2630 on enclosed inquiry slip ▲

VAPORTIGHT BRACKET has cast guard and screw globe

Designed for entrances, stair landings and other locations where protected electrical fixtures are required, No. 43-1 vaportight bracket is equipped with guard and screw globe. Offered with natural or statuary bronze and natural or brushed aluminum finishes, units are made of cast bronze or aluminum. Mounting is with four screws to standard junction box or with adapter plate to 4-in. box. It is wired for installation and accommodates 100 w bulb. Wall plate is 5 in. Use can be with globe down or inverted. Made by **McPhilben Mfg. Co.**, Dept. N, 1329 Willoughby Ave., Brooklyn 37, N. Y.

▲ For more details circle NED-2631 on enclosed inquiry slip ▲

FORK LIFT ATTACHMENT industrial truck unit lifts 1000 lb



Five-foot power driven fork lift attachment for Moto-Bug industrial truck has capacity rating of 1000 lb at 15-in. load center. Truck can climb 12 per cent grade with full load. Turning radius is 61 in. Operated by hydraulic unit, attachment is easily interchanged with other front end attachments. Truck itself has 6-hp gasoline engine, large steering wheel connected directly to dual rear wheel through a 3.6 to 1 gear reduction, 1500-lb weight and automotive type differential for two-wheel drive. Made by **Kwik-Mix Co.**, Dept. NE, Port Washington, Wis.

▲ For more details circle NED-2632 on enclosed inquiry slip ▲

TINY but MIGHTY!

SKINNER STAINLESS STEEL SOLENOID VALVES

. . . Another case of "a good thing in a small package"! Users are amazed at the ruggedness and unusually large capacity of Skinner Valves—they're tiny but mighty, with a standard range for gaseous or liquid media from 5 to 250 p.s.i., and special from 5 to 850 p.s.i. Their soft insert seat prevents leakage and positive action is assured by spring loading. Skinner Valves may be used in any position, with pipe connections furnished to suit specifications. Power consumption is 10 watts max. Special coils for high humidity or high temperature applications can be supplied. Standard models are approved by Underwriters' Laboratories. *Write for Bulletin No. 501.*

SKINNER ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY
135 Belden Ave., Norwalk, Conn.

▲ For more details circle NED-2633 on enclosed inquiry slip ▲

AMAZING SPRAY GUN PRESSURIZED BY CO_2!

NO HOSES • NO COMPRESSOR • NO ELECTRICAL OUTLETS • NOTHING EXTRA TO BUY!

BECKER *PRESSURE-TYPE* **SPRAY GUN**

USED EXTENSIVELY IN FACTORIES, HOMES, FARMS, INSTITUTIONS

For:
- Paints
- Oils
- Varnishes
- Enamels
- Fire-Proofing
- Decorating

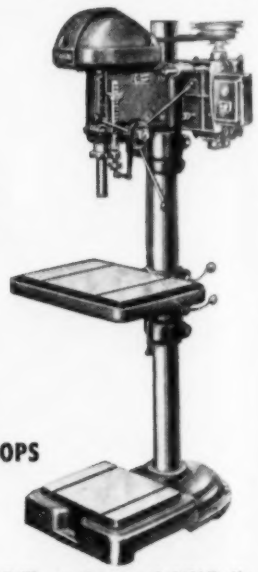
Handy for hundreds of industrial uses where expensive, heavy, cumbersome compressor type spraying is unnecessary. Becker Spray Gun is ruggedly built; heavy gauge (21 liquid oz.) steel container, cast aluminum head, brass and stainless inserts. Powerful CO_2 cartridges spray up to one container-full. See your Distributor or order direct, postpaid. Extra CO_2 cartridges at your dealer's or 10 for $1 postpaid.

SULLIVAN-BECKER CO., DEPT. 172-C, Kenosha, Wis.

▲ For more details circle NED-2634 on enclosed inquiry slip ▲

ANNOUNCING

THE NEW CLAUSING 18" Drill Press



A HEAVY DUTY GENERAL PURPOSE DRILL FOR PRODUCTION, TOOL ROOM, MAINTENANCE & SERVICE SHOPS

The new Clausing 18" is a rugged heavy-duty precision drill press — ideal for continuous production or precise tool room work. Has four ball bearing drive, with both races in lower double-row bearing absorbing drill thrust; 6½" spindle travel for more efficient use of production chucks; Vernier depth control stop; positioning mechanism moves *both* head and table. Ground base. Send for catalog.

★ Drills to Center of 18¼" Circle. ★ Drills ¾" in Steel, 1" in Cast Iron. ★ 6½" Spindle travel. ★ 63/64" Spindle with No. 3 Morse Taper. ★ 39" Capacity Spindle to Table. ★ 13" x 18" Production Oil Table or 12" x 14" Tilting Table.

Atlas CLAUSING PRECISION MACHINE TOOLS

CLAUSING DIVISION
ATLAS PRESS COMPANY
323 N. PITCHER ST., KALAMAZOO, MICH.

▲ For more details circle NED-2635 on enclosed inquiry slip ▲

Everyone Can Count on

VEEDER-ROOT

Military reconnaissance men know the value of the "intelligence reports" faithfully rendered by these Veeder-Root Distance and Topography Counters. And other men, who have to do the close figuring in other arms of the service, they too count on Veeder-Root Counters in more ways than you could shake a "slip-stick" at.

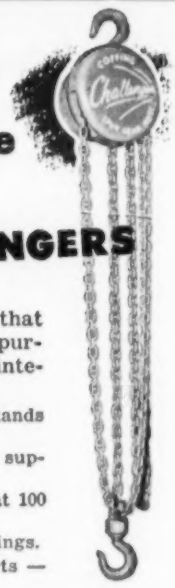
Now if we can help *you* to help these men, by figuring out some new and unusual application of Veeder-Root *Count*rol in defense production, then you can count us at your service.

VEEDER-ROOT INCORPORATED
HARTFORD 2, CONN.

▲ For more details circle **NED-2636** on enclosed inquiry slip ▲

How you save

on hoist maintenance with the new



COFFING CHALLENGERS

Here are just a few of the "extras" that keep the new Coffing Challenger spur-gear hoists on the job, save maintenance:

- Housing is formed steel plate — withstands shock loads and rough handling.
- Laminated steel back plate gives extra support to hoist mechanism.
- Has five-to-one safety factor, tested at 100 percent overload.
- Lifetime lubrication for gears and bearings.
- The Challenger has only 29 basic parts — simplest spur-gear hoist ever made.
- May be completely disassembled in minutes with ordinary tools.

Test these points yourself. Pick out the toughest hoist job you have, install a Coffing Challenger spur-gear hoist — then see how little maintenance is required, how they *stay on the job*.

For further information on Challengers, write Dept. X3C.

Challengers and other Coffing spur-gear hoists in capacities from 1/2 to 5 ton.

Quik-Lift Electric Hoists
Hoist-Alls • Safety-Pull
Ratchet Lever Hoists
Mighty-Midget Pullers
Differential Chain Hoists
Load Binders • I-Beam Trolleys

Sold By Distributors Everywhere

COFFING HOIST COMPANY
Danville, Illinois

▲ For more details circle **NED-2637** on enclosed inquiry slip ▲

low level cost... all level comfort with DUNHAM FIN-VECTOR RADIATION

Sloping Top

Flat Top

Expanded Metal Top

Put Dunham Fin-Vector Radiation *at any height* along outside walls and you get the heat you need—for *less*.

Materials used are those best suited to rapid heat transfer. Finned pipe heating elements can be installed one, two or three tiers high.

Light in weight, Fin-Vector requires few supports . . . is easy to handle. Three cover designs—various sizes and types of heating elements—to choose from. Made in lengths from 2 ft. to 10 ft. in 6 in. increments to reduce on-the-job cutting, speed assembly.

For further information, WRITE FOR BULLETIN 1251-14.

DUNHAM

C. A. DUNHAM CO.
400 W. Madison St., Chicago 6, Ill.
In Canada: C. A. Dunham Co. Ltd., Toronto
In England: C. A. Dunham Co. Ltd., London

HEATING SYSTEMS AND EQUIPMENT

▲ For more details circle **NED-2638** on enclosed inquiry slip ▲

ELECTRIC PANEL HEATER
attains uniform surface temperature

Plugged into any 110-v electric outlet, Hot Rock panel heater can be hung flush against wall or suspended from ceiling. It attains a uniform temperature of approximately 190° F over the entire surface and creates no fire hazard. Standard size is 2 x 3 ft, and unit is supplied complete with 6-ft cord. List price is $39.50. Made by **Electrofilm Corp.**, 7116-21U Laurel Canyon Blvd., North Hollywood, Calif.

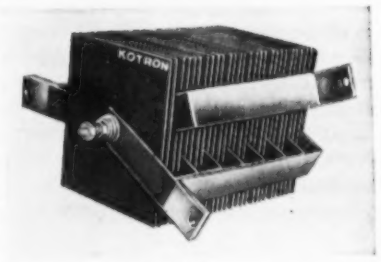
▲ For more details circle **NED-2639** on enclosed inquiry slip ▲

PORTABLE AIR MOVER
operates on compressed air or steam

Intermittent or emergency ventilation, removal of contaminants from confined areas or rapid cooling may be obtained by use of MSA-Lamb Air-Mover, a device which employs steam or compressed air in its principle of operation. Device is horn-shaped, with a bell-formed base, and converts pressure of air or steam from any supply source into a large induced volume of moving air. Three models are available: No. 3, weighing 6½ lb, moves 800 cfm with 90-lb line pressure supply; No. 6 weighs 31 lb and moves up to 3150 cfm at 70 lb line pressure; No. 10, 47 lb, handles 5160 cfm at 80-lb pressure. Made by **Mine Safety Appliances Co.**, 220 N. Braddock Ave., Pittsburgh 8, Pa.

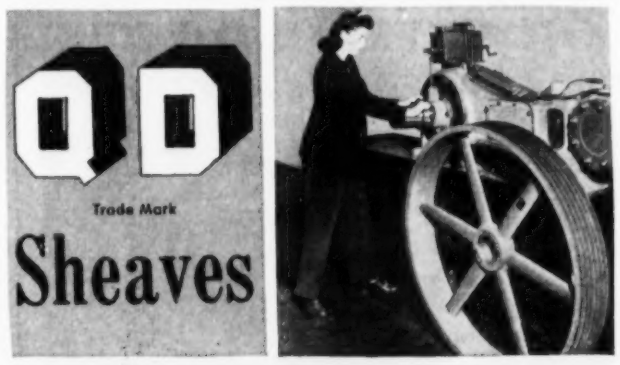
▲ For more details circle **NED-2640** on enclosed inquiry slip ▲

SELENIUM RECTIFIER
40-v cells used in compact unit



Use of higher-voltage cells in line of selenium rectifiers permits considerable reduction in size and weight of rectifier stacks. The cells, capable of blocking 40 v root-mean-square, can deliver standard current density of 0.333-amp per square inch with maximum ambient temperature of 35° C. For low voltage applications that do not necessitate use of higher voltage cells, greater currents can be carried by the cells. Cells are custom-processed to various controlled blocking voltages and current densities. Also available is a 60-volt root-mean-square rectifier cell with same specifications as 40-v cell. Made by **Kotron Rectifier Corp.**, 54 Clark St., Newark 4, N. J.

▲ For more details circle **NED-2641** on enclosed inquiry slip ▲



No alignment problems here

This slim girl is tightening the tapered split hub of the Worthington QD Sheave on the shaft of a big machine.

The 48 in. rim she'll place on the hub (with the aid of a hoist) weighs 440 lbs, about four times her own weight. But she won't have to do any difficult juggling to mount the big sheave with the large end of the taper bore over the small end of the taper cone QD hub. She's already taken care of alignment with the hub.

And if drive arrangements are changed later, it will be easy to remove the sheave and place another size on the same hub. Write for more information.

Worthington Pump and Machinery Corporation, Multi-V-Drive Sales Division, Buffalo, N. Y.

WORTHINGTON
Multi-V-Drives

▲ For more details circle **NED-2642** on enclosed inquiry slip ▲

BAYFLEX® disc-wheels
for fast and smooth cutting action
•
Durability
•
Safety

For weld removal on angle iron, pipe, or other structural steel. Mill scale removal. Chamfering metal preparatory to welding. Smoothing down flame cut edges. Light snagging, deburring, blending and finishing soft, non-ferrous materials.

Formerly the above job required a 3½ pound cup wheel for rough grinding plus a sanding disc for finish grinding. This caused operator fatigue and wasteful machine "down-time".

The New Way . . . The Bayflex Way!

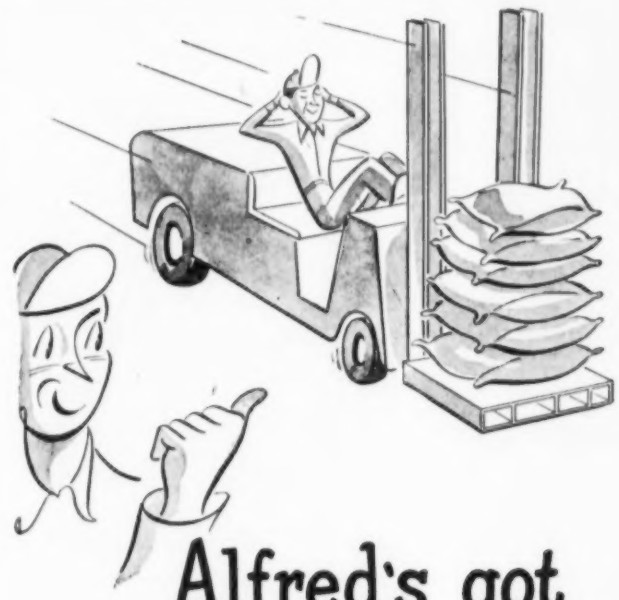
Rough grind and finish where required with a single one pound Bayflex disc-wheel in a fraction of the time . . . EASIER . . . SAFER . . . MORE ECONOMICAL.

BAY STATE

Bay State Abrasive Products Co.
Westboro, Massachusetts
Branch Offices and Warehouses — Chicago, Cleveland, Detroit, Pittsburgh
Distributors — All Principal Cities
In Canada: Bay State Abrasive Products Co. (Canada) Ltd., Brantford, Ontario

Send for information-packed "Big Three" catalog

▲ For more details circle **NED-2643** on enclosed inquiry slip ▲



Alfred's got the soft job

(HE NEEDED IT)

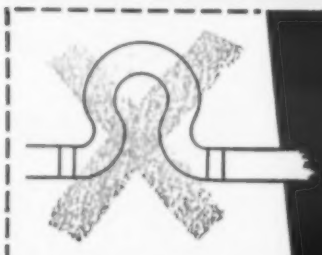
That old lift truck Alfred used to command finally broke down. The company junked it and Alfred didn't fret. Now he's got a new one equipped with MONARCH MONO-CUSHION TIRES—just like the rest of us. Alfred's happy, the company's happy—Alfred gets a soft ride, the company's saving money on floor and truck maintenance.

Your best source for replacement tires is the manufacturer of your vehicles, who can supply you, through his distributors, with Monarch Tires engineered for your application.

THE MONARCH RUBBER COMPANY
200 LINCOLN PARK, HARTVILLE, OHIO
DETROIT OFFICE, 7-255 GENERAL MOTORS BLDG.

SPECIALISTS IN INDUSTRIAL SOLID TIRES AND MOLDED MECHANICAL RUBBER GOODS

▲ For more details circle **NED-2644** on enclosed inquiry slip ▲

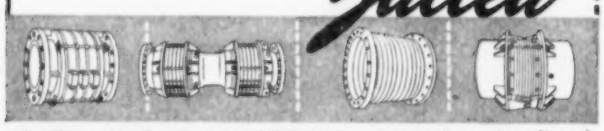


IF YOU ARE COST CONSCIOUS...

...then consider this important point when buying expansion joints: The cost of merely insulating an expansion bend is frequently much more than the cost of a Zallea long-life Expansion Joint!

Want proof? Then write today for Zallea Catalog 47. It explains in detail how Zallea Expansion Joints will save you money... give you longer service life. Zallea Brothers, 818 Locust St., Wilmington 99, Del.

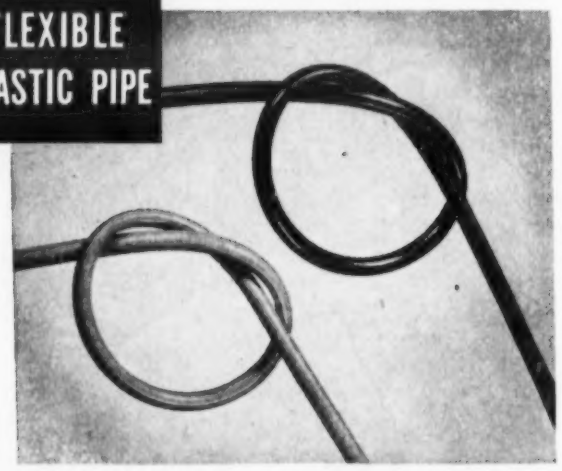
Zallea



For more details circle NED-2645 on enclosed inquiry slip

JOHNSONITE FLEXIBLE PLASTIC PIPE

Here is the quality Plastic Pipe that can be tied in a knot, is 13 times lighter than ordinary pipe and is used everywhere. Corrosion-proof; acid-resistant; low-cost; excellent insulation material; lasts over 30 years; and easy to install.



Johnsonite has *proven* itself in the following applications and is being tried in new ones constantly:

Plating industry	Well installation	Chemical Processing
Cable covering	Irrigating golf courses	Beverage Processing
Industrial drainage	Municipal water systems	Electrical uses
Mines	Farms	Food Processing

JOHNSONITE Rigid Plastic Pipe is also available for special applications.

WRITE FOR OUR CATALOG FOR FURTHER DETAILS

JOHNSON PLASTIC CORP.
P. O. BOX 268 • CHAGRIN FALLS, O.

For more details circle NED-2646 on enclosed inquiry slip

EXPLOSION-PROOF

Electrically-Controlled AIR VALVE

Meets fully Group D, Class 1, National Electric Code Standards of National Association of Fire Underwriters, for wiring in hazardous locations.

The Bellows Explosion-proof Electroaire Valve is a complete packaged unit; 4-way directional slide valve, independent speed controls, low voltage solenoid controls. Three port sizes: 1/4", 3/8", 1/2". Can be arranged for direct connection to or remote control of any air cylinder of suitable capacity. Write for Bulletin AVX-310. Address Dept. NED 352.

"Controlled-Air-Power for Faster, Safer, Better Production"

The Bellows Co.
AKRON 9, OHIO

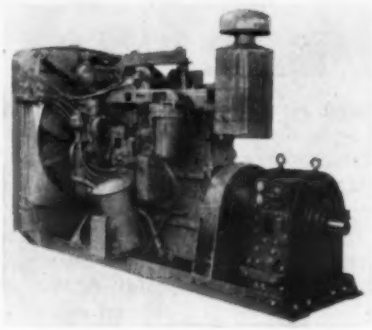
For more details circle NED-2647 on enclosed inquiry slip

VERTICAL GASOLINE ENGINE
air-cooled units rated 1½ to 2½ hp

Several improvements have been incorporated in 1½-hp models AW-7 and AD-7, 2-hp models AW-7B and AD-7B, and 2½-hp models AD-8 and AW-8 vertical-shaft air-cooled gasoline engines. Positive lubrication of connecting rod and cylinder wall are provided. Foreign material is excluded from cooling system by rotating screen held in place by starter pulley, and slinger seal prevents anything from entangling with crankshaft. Oil level dipstick checks oil level quickly. Ball-check type breather insures against water or dirt entering crankcase. Use of backplate with large metering slot creates 50 per cent more air flow for added cooling. For extra lugging performance, Zenith or Tillotson carburetor is available, and oil bath air cleaner is optional equipment. Made by **Continental Motors Corp.**, Industrial Air-Cooled Engine Div., 12802 Kercheval Ave., Detroit 14, Mich.

For more details circle NED-2648 on enclosed inquiry slip

TORQUE CONVERTER
single stage heavy equipment unit



Hydraulic torque converter and hydraulic coupling are combined in model 17-K single-stage, three-element type torque converter. For service as automatic transmission in shovels and cranes, oil well rigs, logging machinery, locomotives, material handling devices and other equipment, unit can be used with gas or diesel engines rated up to 300 hp. Ball bearing converter has variable torque ratio up to 3 to 1. At zero output speed, torque multiplication is highest. Overload will not cause stalling. When torque ratio reaches 1 to 1, reaction member is free wheeled and unit acts as hydraulic coupling. Major elements consist of converter pump, converter turbine and reaction member. Standard SAE No. 10 motor oil is used and oil filter, and temperature and pressure gages are built in. Made by **Torcon Corp.**, 1167 W. Fifth St., Ashtabula, O.

For more details circle NED-2649 on enclosed inquiry slip

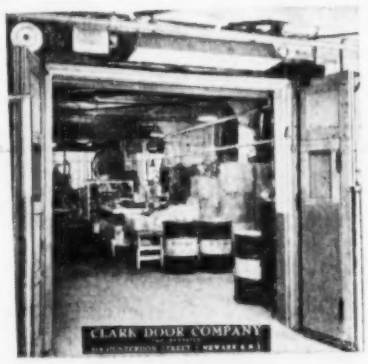
DO YOU KNOW? Chevron starting fluid is saving thousands of dollars in starting diesel and gasoline engines in outdoor temperatures ranging from −50 to 40° F. Gelatine capsule of fluid is inserted in holder on dashboard of vehicle, is pierced by puncturing tool, and fluid is injected into air intake manifold system through an engine primer. Engine wear is minimized and battery life increased. Distributed by California Oil Co., 350 Fifth Ave., New York 1, N. Y.

For more details circle NED-2650 on enclosed inquiry slip

INDUSTRIAL DOORS "PACKAGED" — *Ready to Install*

A 3 hour job for any maintenance crew.

Only the Prest-O-Matic comes to you with door and jambs, and all hardware including motor operator, completely assembled. This is your guarantee of perfect performance.



★ OPEN OR CLOSE IN 3½ SECONDS
★ PERMITS FULL USE OF DOORWAY WIDTH
★ NO ALTERATIONS OR FITTING NEEDED
★ SEALED AGAINST WEATHER OR WIND

PREST-O-MATIC

Industrial Doors function faultlessly because they are designed "in balance", utilize thrust and roller bearings and operating mechanism adequate to heaviest usage. Pneumatic, Pull-cord, Floor Plate or Electric Eye optional.

Write for Catalog!

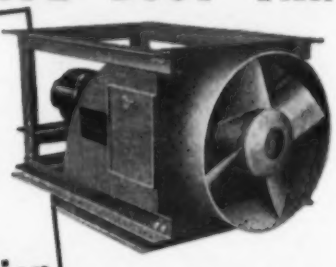
CLARK DOOR COMPANY
511 Hunterdon Avenue, Newark 8, N. J.

For more details circle NED-2651 on enclosed inquiry slip

Wing

ELBOW TYPE DUCT FANS

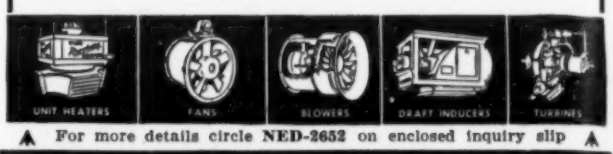
Delivers Large Air Volumes with Low Power Consumption



Complete range of sizes from 10 in. to 60 in.; and from 200 to 85,000 c.f.m.

The Wingfoil Axial Flow Duct Fan, in either elbow type or straight line type, is a compact, economical fan designed to operate against static pressure. The elbow type replaces an elbow in a run of duct, with the motor outside the housing, unaffected by hot or dirty air or gases. Belt or direct drive. Wingfoil "Non-overloading" fan wheel characteristics. Write for bulletin.

L. J. Wing Mfg. Co. 165 Vreeland Mills Road Linden, New Jersey



For more details circle NED-2652 on enclosed inquiry slip

New! di-acro BOX FINGER BRAKE

Four models 6" 12" 18" 24"
Capacity—16 Gauge Steel

3 TOOLS IN ONE
1 BOX and PAN BRAKE
2 STANDARD BRAKE
3 BAR FOLDER

One box or 10,000 — can be economically produced with the versatile new Di-Acro Box Finger Brake. Serves perfectly for all standard brake operations —an Acute Angle Bar converts the brake to a bar folder for locks, seams, hems and sharp angles. The unique Di-Acro Open End Finger forms square or triangular tubes and other similar parts. The Box Finger Bar can be easily mounted on all standard Di-Acro Brakes.

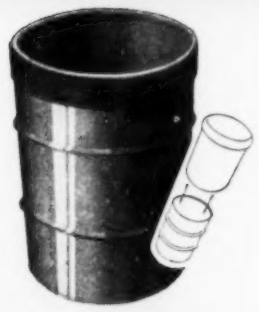
See Di-Acro Exhibit Booth 1338 ASTE Industrial Exposition Chicago, March 17-21

SEND FOR 40 PAGE CATALOG

O'NEIL-IRWIN MFG. CO.
354 EIGHTH AVENUE, LAKE CITY, MINN.

For more details circle NED-2653 on enclosed inquiry slip

"DROP-IN" RUBBER LININGS FOR 55 GALLON DRUMS



Made of special resistant rubber, these inexpensive and handy barrel liners are unequaled for use as temporary or emergency storage tanks of acid or alkaline solutions or for quickly improvised still tanks for plating experimentation. 22" in diameter, 40" deep, with a .050 wall, the liner fits a 55 gallon drum perfectly and holds itself in position by an overhanging lip. No difficult installation —simply drop into the drum and fasten the lip over the side and you have rubber lined drum ready for use.

The lining is highly suited to handle sulphuric, oxalic, phosphoric, muriatic and diluted hydrofluoric acids, as well as alkaline and acid solutions, for brass, cadmium, silver, tin, zinc, gold, nickel and copper.

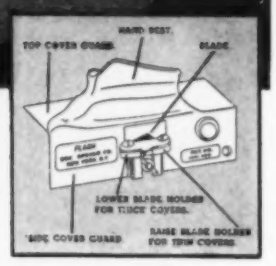
Order your supply today at the low price of $19.75 each, f.o.b., Detroit. Immediate shipment.

Pioneer of A Better Way in Plating

THE Udylite CORPORATION
DETROIT 11, MICHIGAN

For more details circle NED-2654 on enclosed inquiry slip

Amazing
FLASH BOX OPENER
Opens Any Carton Quicker . . . Cleaner



Exclusive patented blade holder adjustable to varying thicknesses of carton covers.

THE ONLY CARTON OPENER THAT GIVES YOU ALL THESE ADVANTAGES:

Penetrates exactly under the outer cover thickness • Protects contents of carton • Cuts clearly to permit re-use • Prevents accidents • Saves time • Eliminates fatigue. ***Already accepted by leading industries.***

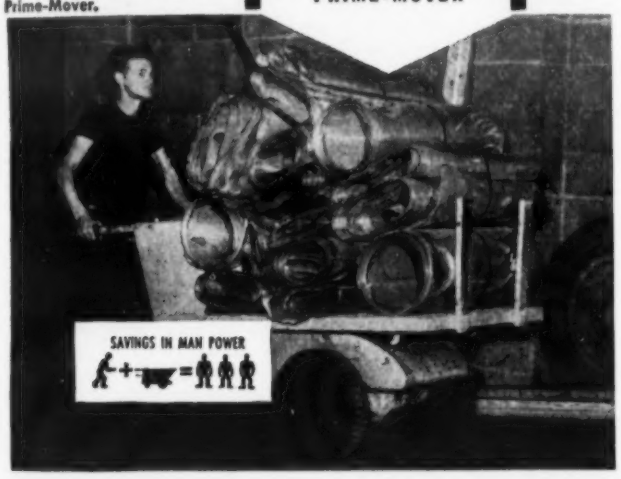
Retail Price **$1.75**

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

For more details circle NED-2655 on enclosed inquiry slip

This load of metal coils is an example of the many bulk handling jobs around a plant that can be done easier, faster and at less cost by one man and a Prime-Mover.

THIS IS ONE PLACE IN YOUR PLANT FOR PRIME-MOVER



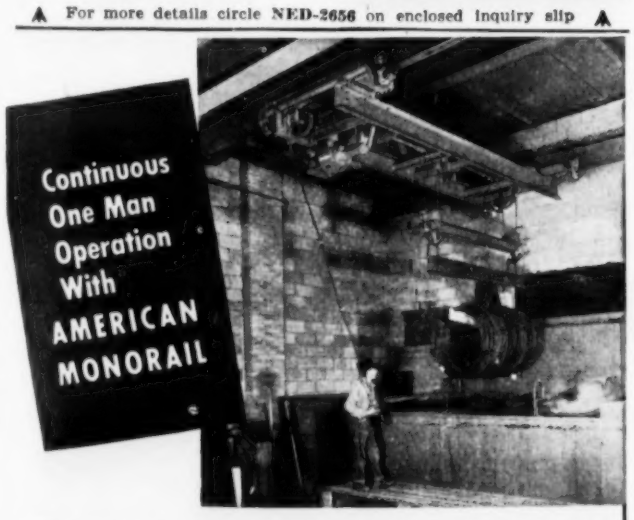
Fills a real need in bulk handling!

Wherever there is scrap, cuttings, filings, and other clean up jobs, Prime-Mover has the capacity and power to save the time of at least three men. Dependable 5 H. P. Wisconsin engine provides ample power, forward and reverse, to take 20% grades easily, with 1500 pound load. For name of distributor and complete data, write to us.

THE PRIME-MOVER COMPANY
MUSCATINE, IOWA

The Bell PRIME-MOVER

For more details circle NED-2656 on enclosed inquiry slip



Here's an operation that must be on the go, all the time and fast, and yet, one man plus an American MonoRail Crane keeps the line flowing smoothly and fast. Fast operating, constant service, American MonoRail Cranes are ruggedly built to handle loads up to 10 tons at operating speeds of 500 feet per minute. Articulated trolleys assure perfect alignment of trucks for smooth crane travel.

Let an American MonoRail engineer explain all the advantages of these constant service cranes.

THE AMERICAN MONORAIL COMPANY
13116 Athens Avenue • Cleveland 7, Ohio

For more details circle NED-2657 on enclosed inquiry slip

New Processes and Materials

HEAT RESISTANT PAINT
protects boilers, stacks, furnaces

High-heat Thermalite aluminum paint is available for protecting metals subjected to temperatures in range of 200 to 1000° F. Maintenance finish can be applied to boilers, kilns, exhaust stacks, furnaces, melting pots, refining equipment and laboratory apparatus. It contains silicones and offers resistance to weather, chemical fumes and salt spray, as well as preventing attack of rust and corrosion. Paint does not discolor, blister, flake or burn off at temperatures up to 1000° F. Application is by brush or spray to interior or exterior surfaces. One gallon covers up to 1000 sq ft. Illustration shows comparison between quality aluminum paint, left, and Thermalite, right, when subjected to 1000° F direct heat. Made by **Tropical Paint & Oil Co.,** 1246 W. 70th St., Cleveland 2, O.

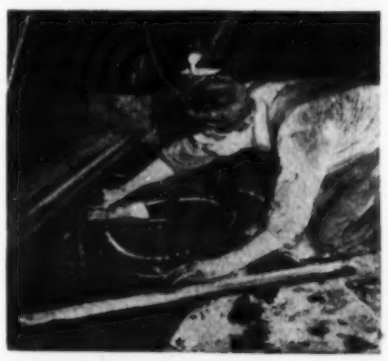
For more details circle NED-2658 on enclosed inquiry slip

FLUORESCENT FIXTURE FINISH
features high reflectivity

White baking enamel developed for use in finishing fluorescent fixture reflectors has good reflectivity and resistance to ultraviolet rays, the latter feature improving color retention. Addition to Codur line of baking enamels tends to eliminate fading in service. Made by **Maas & Waldstein Co.,** 440 Riverside Ave., Newark 4, N. J.

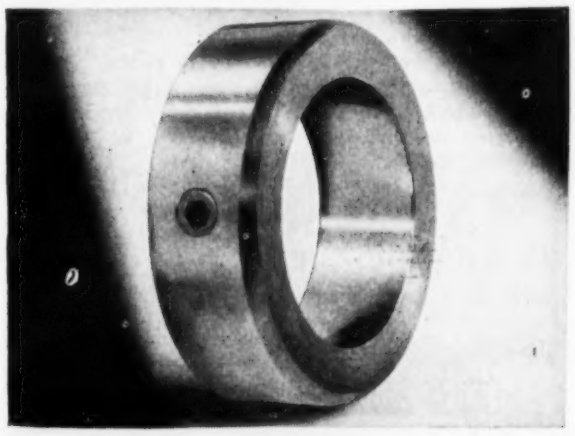
For more details circle NED-2659 on enclosed inquiry slip

FLOORING CEMENT
for concrete, stone or brick floors



Repair or resurfacing of any composition concrete, stone or brick floor can be done effectively with Trowel-In flooring material. Compound is ready for immediate use, and repairs with it are ready for traffic in 18 hours. For resurfacing, material is applied in thickness of only ⅜ in., and as patching cement, it produces feather-edge repairs without chopping out old floor. Material can aid in leveling linoleum and tile, setting floor plates and drains and offers protection from water, moisture and vibration. It trowels in easily around machine bases, pipes and obstructions and shows no shrinkage cracks. Made by **Flexrock Co.,** 3699 Cuthbert St., Philadelphia 4, Pa.

For more details circle NED-2660 on enclosed inquiry slip



Standardize on standard
HALLOWELL SOLID STEEL COLLARS

It's fast and easy to buy standardized, precision-made HALLOWELL Solid Steel Collars from your distributor's stocks. Just pick up the telephone and place your order.

42 stock sizes—for shafts from 3/16" to 3" inclusive—are positioned on the shafts by UNBRAKO Self-Locking Set Screws, the screws that won't work loose.

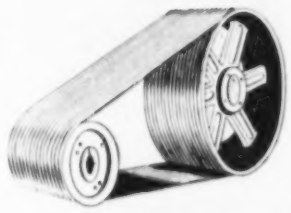
Write for descriptive literature and the name and address of your nearest HALLOWELL Industrial Distributor. STANDARD PRESSED STEEL CO., Jenkintown 24, Pennsylvania.

HALLOWELL
POWER TRANSMISSION DIVISION **SPS**
JENKINTOWN PENNSYLVANIA

For more details circle NED-2661 on enclosed inquiry slip

CONGRESS SHEAVES and V-BELTS

- Precision built. Soundly engineered. Widely used as original equipment by hundreds of the largest manufacturers of such appliances as washing machines, dryers, laundry equipment and air conditioning installations.
- Congress FHP pulleys are available in attractive 3-color individual boxes, with pulley outside diameter and bore size plainly marked. Simplifies storing-selling.



Immediately Delivery From Stock

WRITE FOR CATALOG

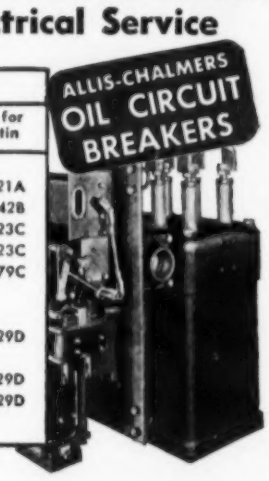
CONGRESS DIAMOND BORED **DRIVES**
3750 E. OUTER DRIVE, DETROIT 34, MICH.

For more details circle NED-2662 on enclosed inquiry slip

FULL ELECTRICAL PROTECTION
for Industrial Electrical Service

In these ratings

Type	Volts	Amps	Kva Int. Cap.	Send for Bulletin
E-145	2,500	400	15,000	71B6021A
E- 47	4,160	600	25,000	71B6342B
D- 20	4,160	1200	50,000	71B6023C
D- 20	7,200	600	50,000	71B6023C
DZ- 40	7,200	600 1200 2000	100,000	71B6179C
DZ- 60	13,800	600 1200	150,000	71B6129D
DZ-100	13,800	1200	250,000	71B6129D
DZ-200	13,800	1200 2000	500,000	71B6129D



ASK YOUR ELECTRIC POWER UTILITY about Allis-Chalmers circuit breakers. Get proof of their reliability, economy and adaptability to many operating conditions. Breakers have simple mechanism and contact design . . . a variety of accessories for automatic and manual tripping and closing.

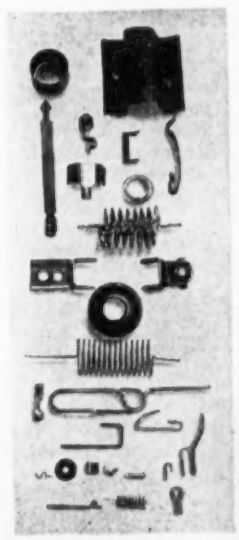
Over 50 years of power circuit breakers (air or oil). Ratings 2500 to 230,000 volts and 15,000 to 10,000,000 kva interrupting capacity for industry and power utilities. For complete information on the breaker to fit your requirements write Allis-Chalmers, Milwaukee 1, Wisconsin.

A-3364

ALLIS-CHALMERS

For more details circle NED-2663 on enclosed inquiry slip

Priced Right!
WIRE FORMS
& *Metal Stampings*



High-speed, quality production with custom-made precision. Wire formed to any shape for every need.

IMMEDIATE CAPACITY FOR DEFENSE SUB-CONTRACTS

STRAIGHTENING & CUTTING
Perfect straight lengths to 12 ft.
.0015 to .125 diameter

WIRE FORMS
.0015 to .080 diameter

SMALL METAL STAMPINGS
.0025 to .035 thickness
.062 to 3 inches wide

Specializing in Production of Parts for Electronic and Cathode Ray Tubes

Write for illustrated folder. Send Blueprints or Samples for Estimate.

ART WIRE and STAMPING COMPANY
15 BOYDEN PLACE
NEWARK 2, N. J.

For more details circle NED-2664 on enclosed inquiry slip

This Revolutionary NEW
GRIP-STRUT GRATING
gives MAXIMUM STRENGTH with MINIMUM WEIGHT

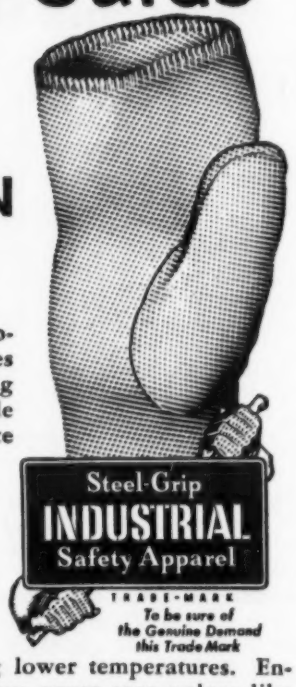
RUGGED
LOW COST
NON-SKID
VERSATILE

Not welded. Vertical members joined by integral saddles—side channel members and grating are a single unit—combines great strength with light weight. Simplifies installation—greatly reduces costs of construction. Easily replaces old or obsolete types of grating. Feature for feature, Grip Strut has a lower initial cost factor than any other type. Available in steel or aluminum.

WRITE FOR FULL DETAILS
The GLOBE Company
MANUFACTURERS SINCE 1914
4002 S. PRINCETON • CHICAGO 9, ILL.

For more details circle NED-2665 on enclosed inquiry slip

"WOVEN-Gards"
BETTER HAND PROTECTION
at amazing low cost



"Woven-Gards" are hand protectors, mitts, pads and sleeves made of a new long-wearing safety material. They provide flexibility, comfort, resistance to abrasion and cutting far beyond that of anything used before. They are extremely oil-absorbent and do an excellent job when handling oily, slippery sheets. The porous weave makes them one of the finest protectors for handling lower temperatures. Enthusiastic users say they have never seen values like "Woven-Gards." Excellent protection at lowest cost. Send now for descriptive folder and prices.

INDUSTRIAL GLOVES COMPANY, 1521 Garfield Street, Danville, Illinois
A Corporation
(In Canada: Safety Supply Co., Toronto)

For more details circle NED-2666 on enclosed inquiry slip

Know These Facts About SAVINGS on
SLOW-SPEED DRIVES?

1. Know that you can select a drive to give you any speed from 11 to 154 r.p.m. direct from distributors' stocks saving design and engineering costs?

2. Know that there is a slow-speed drive available that costs very little initially and almost nothing to maintain?

3. Know that there is a standard speed reduction unit available that will give you higher production, less down-time and positive protection against overload damage?

4. Want to know more about it?

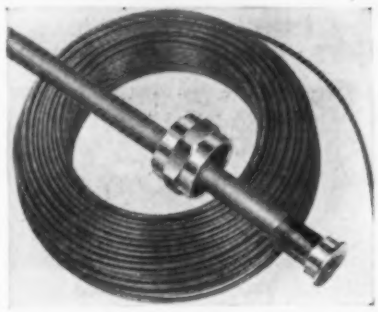
Get the story on American Speed Reduction Drives in a hurry—clip and mail the coupon below to:

THE AMERICAN PULLEY COMPANY
4294 Wissahickon Ave., Philadelphia 29, Penna.
Gentlemen:
I have a slow-speed problem—these facts I want RIGHT AWAY—
Please rush your bulletin on American Speed Reducers to:
NAME_____
ADDRESS_____
CITY_____ ZONE_____ STATE_____

For more details circle NED-2667 on enclosed inquiry slip

New Processes & Materials

PLASTIC TUBING
for fluid, gas or vacuum line uses



Tensile strength of Flexlite plastic tubing is 600 psi at 70° F, with strength increasing as temperature decreases. Use can be in fluid, gas or low vacuum pressure systems. Tubing remains flexible and will not harden, dry out, become brittle or crack. Special fittings are used with tubing. Insert for tube has fluted shank which is almost impossible to remove once installed. A stainless steel spring clamp fits over tubing connections. Tubing is made in ¼ and ⅝-in. ID sizes, with larger sizes to be available in future. Made by **Hudson Industries, Inc.**, 4402 St. Aubin Ave., Detroit 7, Mich.

For more details circle NED-2668 on enclosed inquiry slip

LAMINATING MATERIAL
adheres with low pressure

Molding layups can be made without use of staples or other fastening devices by using tacky low-pressure laminating material composed of glass fabric impregnated with General Electric No. 3405 Permafil resin. Known as Phonopreg LP-502, impregnated glass cloth is tacky to touch, but easy to handle. No resin is deposited on hands of user. Supplied ready for molding, material is used for low pressure molding of aircraft tooling jigs and fixtures at temperatures about 300° F and at pressures ranging from 15 to 75 psi. Layups can be made over wood or plaster forms and molding by vacuum bag method. Matched metal die molding can also be used. Parts molded have high mechanical strength, good moisture and chemical resistance and excellent electrical properties. Resin is applied by standard impregnating equipment and degree of tackiness can be varied. Made by **Fabricon Products, Inc.**, 1721 Pleasant St., River Rouge 18, Mich.

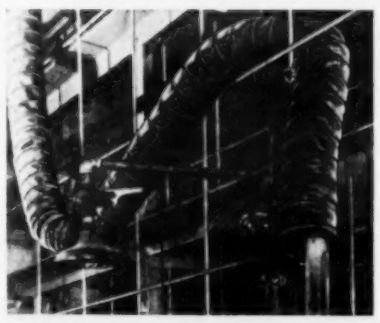
For more details circle NED-2669 on enclosed inquiry slip

THERMOSETTING PHENOLIC RESIN
plastic molds form plaster cores

Material used in plastic molds for forming plaster cores for impeller blade assemblies is Tool-Plastic, a thermosetting liquid phenolic resin. Molds are said to yield an increase of over 1300 per cent in parts produced per tool over previous method of mold production. Durable Tool-Plastic molds produce over 20,000 cores to tolerances of 0.005-in. with no sign of dimensional change in parts. Besides being light and easily handled, phenolic resin can be reworked and minor surface repairs can be effected. Resin available from **Rezolin, Inc.**, Dept. N, 4825 W. Jefferson Blvd., Los Angeles 16, Calif.

For more details circle NED-2670 on enclosed inquiry slip

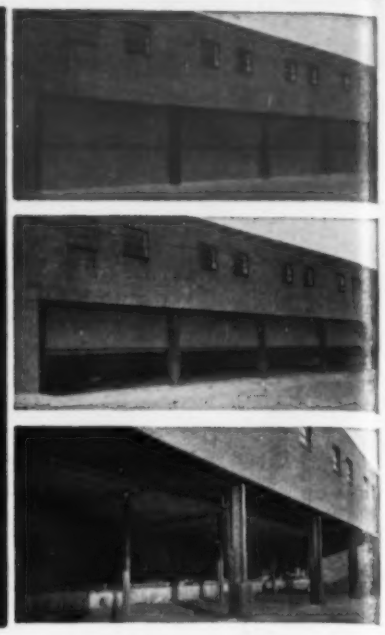
FLEXIBLE FABRIC TUBING
will not kink or collapse



Spiratube flexible fabric tubing for ventilation and product handling has vinyl plastic coating which gives it good abrasion resistance for rough handling and inertness to chemicals and oils. Light weight and accordian-like retractability make handling and shipping easy. It is nonkinkable and does not collapse under average fan suction pressure. Tubing consists of preformed, continuous spring wire ribbing overlapped with spirally wound woven fabric of several alternate types. After fabrication it is coated with B. F. Goodrich Chemical Co.'s Geon latex for abrasion and chemical resistance. Air and other gases, many solids and liquids at low pressure can be conducted. Sections are coupled tightly by belt clamp. Made by **Flexible Tubing Corp.**, Guilford, Conn.

For more details circle NED-2671 on enclosed inquiry slip

FAST-MOVING STEEL DOORS for every industrial purpose



The door requirements of garages, warehouses, loading platforms, factories and other commercial structures can be served with high efficiency by Truscon Steel Industrial Doors, either mechanically or hand-operated. Available in wide variety including straight slide, accordion, vertical lift, turnover, lift-swing, canopy, crane and other types. Write for illustrated literature showing complete Truscon line.

TRUSCON STEEL COMPANY 1096 Albert Street Youngstown 1, Ohio
Subsidiary of Republic Steel Corporation

For more details circle NED-2672 on enclosed inquiry slip

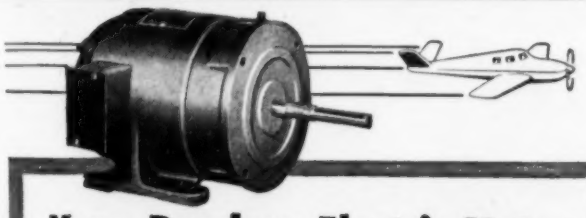
HOUGHTON
COSMOLUBE
MULTI-PURPOSE GREASE
Meets the Needs of Every Industry

THIS ONE GREASE HAS ALL THESE MERITS:
- High Melting Point • Pumps at –20° F.
- Insoluble in Hot or Cold Water
- Resists Oxidation • Adhesive to Metal
- Will Not Separate • Meets All Grease Needs
- Saves Storage Space • Simplifies Inventory
- Eliminates Danger of Misapplication

Write for Bulletin to E. F. Houghton & Co. 303 W. Lehigh Ave., Phila. 33, Pa.

COSMOLUBE
. . . a product of
E. F. HOUGHTON & CO.
PHILADELPHIA • CHICAGO • DETROIT • SAN FRANCISCO
Ready to give you on-the-job service . . .

For more details circle NED-2673 on enclosed inquiry slip



Your Peerless Electric Motor Department can serve you promptly

• One of the finest motor engineering staffs can be your motor department when you call on Peerless Electric.

Peerless private air service—a Beechcraft Bonanza—can carry one of our sales engineers to see you on reasonably short notice, if necessary. He'll get to your problem quickly—right at your desk with your own designers—ready to work out the toughest motor problem.

Peerless Electric motor engineering, noted for dependability and versatility since 1893, is as progressive as the modern age, and now, more than ever, available as the motor department of your business.

THE PEERLESS ELECTRIC CO., WARREN, OHIO
Manufacturers of Quality Motors Since 1893
Single Phase • Polyphase • Direct Current • ¼ to 15 H.P.

Peerless Electric MOTORS·FANS·BLOWERS

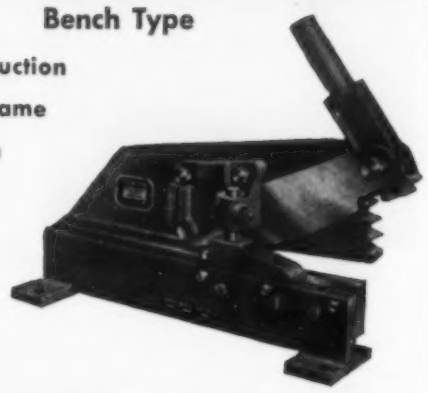
For more details circle NED-2674 on enclosed inquiry slip

SAMSON HAND SHEARS

Bench Type

- All Steel Construction
- Unbreakable Frame
- Easy Operation

IMMEDIATE SHIPMENT



Catalog of Metal Working Equipment furnished on request.

SIZE	No. 3R3	No. 3R4	No. 3R5	No. 3R6	No. 4R10
Cuts sheet or plate up to	14 ga.	1/8"	3/16"	1/4"	5/16"
PRICE	$17.30	$25.00	$31.70	$67.00	$104.25

f.o.b. New York, prices subject to change

JULIUS BLUM & CO., Inc.
Established 1910
536 West 22nd St., New York 11 • WAtkins 9-7042

▲ For more details circle NED-2675 on enclosed inquiry slip ▲

A SINGLE UNIT DOES 2 BIG JOBS

Conoairpak

1. REGULATES
2. FILTERS

- PNEUMATIC GAUGES
- SPRAYING EQUIPMENT
- LABORATORY EQUIPMENT
- INSTRUMENTS & CONTROLS
- PRODUCTION EQUIPMENT

Here's a "small package" replacement for bulky, hard to mount airsets . . . providing precise REGULATION in ranges 0-30; 0-60; 0-125, psi, for inlet pressures up to 150 psi . . . with ability to filter out particles down to 40 microns! Investigate ConoAirpak for all installations requiring more efficiency . . . less space, installation time, maintenance and initial cost. Forged brass and stainless steel construction for corrosion resistance—simplified mounting—large capacity reducing valve with safety relief. Available in a variety of ranges, filter areas, and drip-well capacities.

WRITE TODAY FOR BULLETIN FH-15

Conoflow Controls

CONOFLOW CORPORATION
2100 Arch St., Phila. 3, Pa.

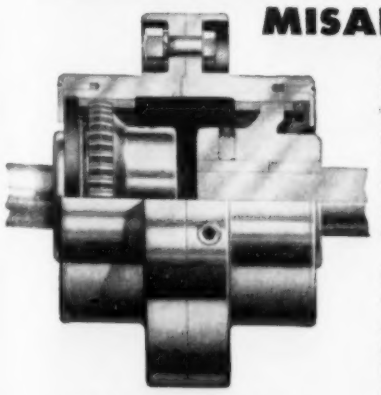
▲ For more details circle NED-2676 on enclosed inquiry slip ▲

AJAX DIHEDRAL

FLEXIBLE COUPLINGS

Protect Against Excessive

MISALIGNMENT



Stock couplings are built to handle misalignment up to 4°
Teeth can be cut to order to handle greater misalignment.

▶ Design, installation and maintenance men are now saving thousands of hours, and dollars by eliminating necessity for precision alignment of direct-connected machines.

Exclusive Ajax Dihedral tooth shape provides for extreme misalignment with tooth clearance (backlash) kept to oil film requirements.

Positive oil seals keep lubrication in and dirt out.

Send for new bulletin.

AJAX FLEXIBLE COUPLING CO. INC.
WESTFIELD, NEW YORK

▲ For more details circle NED-2677 on enclosed inquiry slip ▲

New Processes & Materials

MASONRY WATER REPELLENT
can be applied in 15° F temperatures

Applied by brush or spray, Silipruf is silicone resin based clear, non-staining water repellent coating for porous exterior masonry surfaces such as brick, concrete, stucco, limestone, sandstone and mortar. Repellent does not change color or texture of surface to which applied and does not itself yellow with age. Although coating has high resistance to water penetration, it does not prevent masonry surfaces from breathing or releasing trapped moisture. Applicable in temperatures as low as 15° F, coating helps to reduce masonry disintegration by sealing out moisture which might later freeze. Manufactured by **Preco Chemical Corp.**, Dept. NE, 40 E. 40th St., New York 16, N. Y.

▲ For more details circle NED-2678 on enclosed inquiry slip ▲

MACHINING COOLANT
free from abrasives and acids

High production output and increased life for taps, drills and cutting tools can result through use of Lubri-Cut cooling and lubricating agent. This fire-resistant compound is free of all abrasives and acids and is composed of cooling and lubricating agents that cling to tool in high speed drilling, blind hole tapping, tapping, countersinking, profile routing and swedging operations. Available in both paste and semipaste form, coolant permits tolerances to millionths of an inch and is equally efficient on hard and soft ferrous and nonferrous metals, as well as on plastics and glass. Formulated by **Tap & Drill E-Z Corp.**, 11033 Hawthorne Blvd., Inglewood 169, Calif.

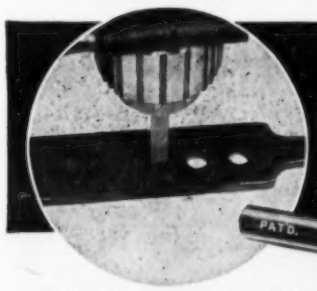
▲ For more details circle NED-2679 on enclosed inquiry slip ▲

WIRE & CABLE CALCULATOR
gives weight, electrical properties

Approximate weight per thousand feet of solid and stranded electrical wire and cable with one, two or three conductors can be obtained from this slide rule type wire and cable calculator. Reverse side shows size of conduit or tubing needed for various numbers of conductors when using various types of lead-covered cables. Allowable current capacities of conductors in amperes and ampere correction factors for room temperatures over 30° F are other data included on plastic calculator. All figures are based on 1951 National Electrical Code. Available free from **Triangle Conduit & Cable Co.**, Dept. NED, New Brunswick, N. J.

▲ For more details circle NED-2680 on enclosed inquiry slip ▲

Drill Hardened Steels
without Annealing—



USE The New IMPROVED "HARDSTEEL" DRILL

With the new, improved "HARDSTEEL" Drill, you can do accurate, smooth drilling, countersinking, counterboring and reaming in steels hardened by any process without first annealing the work. And they work with equal ease on work-hardening steels and high carbon—high chrome steels of any degree of hardness.

"HARDSTEEL" Drills fit standard drill presses. They save time and reduce rejects. They permit engineering changes requiring additional drilling after hardening. And parts drilled after hardening always match at assembly.

Write for a copy of the "HARDSTEEL" Operators Manual showing how "HARDSTEEL" drills are cutting costs in thousands of plants.

You Harden It—We'll Drill It—With "HARDSTEEL"

BLACK DRILL COMPANY, INC.
Division Black Industries
1380 East 222nd St. • Cleveland 17, Ohio

Also makers of— BLACK DRILLING UNITS—AUTOMATIC, SELF-CONTAINED—FOR COST-CUTTING PRODUCTION ON ALL MATERIALS *Write for information*

▲ For more details circle NED-2681 on enclosed inquiry slip ▲

Conveyor Belting tailored to the job

For super-tension jobs involving heavier loads, longer centers, higher lifts—or for handling lighter materials on easier jobs—depend on NYB&P conveyor belts.

NYB&P, backed by more than a century of experience, has the skill and the facilities to produce belts of the most advanced design.

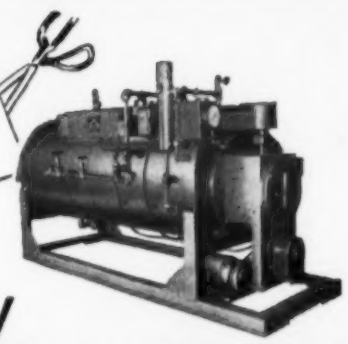
Call on your local NYB&P Distributor for your copy of the NYB&P Conveyor Belt Manual or write directly to address below.

Since 1846

NEW YORK BELTING & PACKING CO.
1 MARKET STREET, PASSAIC, NEW JERSEY

▲ For more details circle NED-2682 on enclosed inquiry slip ▲

Cut Your Steam Production Costs



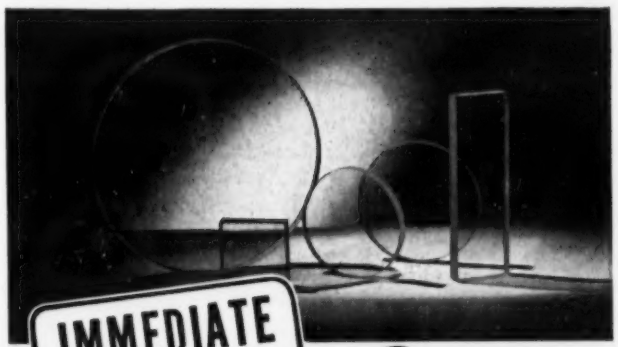
Continental
PACKAGED STEAM GENERATORS

- are easy to install
- economical to operate
- require minimum maintenance

The Continental improved type, 2-pass boiler operates with guaranteed efficiency of at least 80%. Steam moisture content is less than 1%, proved by independent tests. It burns oil, gas, or combination in water-surrounded furnace. Gases spiral through 3" tubes for high heat transfer and low flue gas temperature. Based on proven Scotch Marine design, the Continental needs far less refractory than 3- and 4-pass boilers. Front and back can be opened in less than 15 minutes for easy servicing. The boiler is ready for fully automatic operation after simple service connections. Range of sizes 10 to 500 HP, high or low pressure. Some sizes carried in stock. Contact your local supplier for more information, or send for latest literature on Continental boilers.

BOILER ENGINEERING AND SUPPLY COMPANY
330 Fourth Avenue • Phoenixville, Pa.

▲ For more details circle NED-2683 on enclosed inquiry slip ▲



IMMEDIATE DELIVERY on *Pyrex* Brand HEAT RESISTANT SIGHT GLASSES

Now, Swift offers fast delivery on SIGHT GLASSES, cut or ground in any shape from PYREX Brand Heat-Resistant Polished Plate Glass.

For use on ovens, absorption columns, evaporators, stills, pressure vessels, etc. Resists clouding, pitting, chemicals (except HF and strong, hot caustic solutions). Supplied in rounds, squares, rectangles, and odd shapes in 8 thicknesses (1/8" to 1") and any size up to 24" x 60".

Write, wire or phone for quotation — ask for SIGHT GLASS bulletin.

SWIFT LUBRICATOR CO., INC.
330 TENTH ST., SAN FRANCISCO 3 • ELMIRA, N. Y.
36 OLIVER ST., BOSTON 10

▲ For more details circle NED-2684 on enclosed inquiry slip ▲

NEVER ABSENT WITHOUT NEED

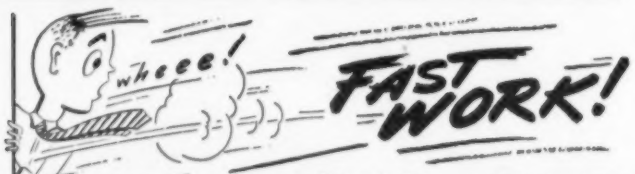
His hands are protected by Jomac Work Gloves. They prevent nasty burns, cuts and other such injuries. Jomacs resist sharp edges, heat and cold. They help keep workers on the job. And, because they outlast ordinary gloves 700% or more, they help increase production. Jomacs are washable, flexible and reversible. They resist tearing and snagging, too.

SPECIFY JOMACS FOR BETTER PROTECTION

We make Jomac Cloth and Jomac Gloves within our own plant. Because we do, we can guarantee the uniformly high quality of Jomac Work Gloves and the hand protection they provide.

C. WALKER JONES CO.
6135 N. Lambert St., Philadelphia 38, Pa.

For more details circle NED-2685 on enclosed inquiry slip



FAST WORK!

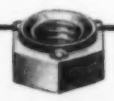
WITH GRIPCO LOCK NUTS

APPLIED FAST! *Gripco Lock Nuts* are started on the bolt threads *fast* just like a common nut.

LOCK FAST! When the Gripco deflected threads contact the bolt threads, the nut is seated *fast* and locked with a wrench.

HOLD FAST! Until it is removed with a wrench. *Gripco Lock Nuts* can be removed and reapplied many times without appreciable loss of locking effectiveness.

GRIPCO LOCK NUT
makes the Bolt-Thread End as secure as the Head End.



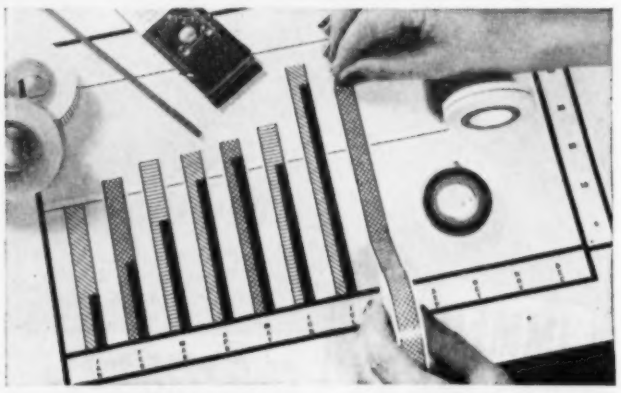
GRIPCO PILOT-PROJECTION WELD NUTS
Also *applied fast.* The pilot positions the nut quickly and accurately, and is instantly attached by resistance welding.

GRIPCO COUNTERSINK WELD NUTS
Weld Fast! The slanting "countersink" section catches loose metal particles and slides them down the slanting "countersink" surface away from the threads. No re-threading required!

GRIPCO WELD NUTS *are furnished with either lock or plain threads.*

GRIP NUT COMPANY
308-G S. Michigan Ave., Chicago, Illinois

For more details circle NED-2686 on enclosed inquiry slip



Amazing NEW METHOD for Making GRAPHIC CHARTS
SIMPLER • QUICKER • BETTER!

Professional Charts can be made quickly, economically by you, your secretary, or any member of your staff—by the

CHART-PAK METHOD

Here's all you do: On a Chart-Pak board, plan the kind of chart you want. Select the proper Chart-Pak materials. A little finger pressure and a little typing does the rest. That's all there is to it. Your chart is ready for presentation or reproduction.

And Note This: Any portion of your Chart-Pak chart can be quickly changed or corrected at any time. What could be more economical?

ATTACH TO YOUR LETTERHEAD

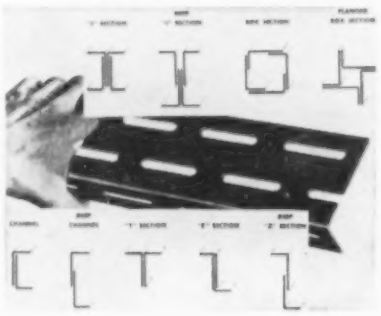
Send me descriptive brochure on the Chart-Pak Method for
Organization Charts ( ) Statistical Charts ( ) Office Layouts ( )

CHART-PAK, INC. 104-T LINCOLN AVE. STAMFORD, CONN.

For more details circle NED-2687 on enclosed inquiry slip

New Processes & Materials

STEEL ANGLE FABRICATING UNITS slotted for rapid bolt assembly



Available in limited supply are these Dex-Angle 10-ft long, 3 x 1.5 x 0.080-in. slotted-leg galvanized steel angles designed for all-purpose industrial fabrication. Lengthwise slots allow rapid bolted assembly of shelving, bins, scaffolding, ladders, tables, machinery mounts, partitions, conveyor-line structures, skids, machine guards and hand rails. Hacksaw and wrench are only tools needed for assembly, and indentations spaced at 3-in. intervals along angle simplify measuring and cutting. Auxiliary components include flanged panels and ball bearing casters. Used as 5½-ft uprights, angles support 1200 lb. They are sold by the package which contains ten 10-ft lengths and 75 bolts and nuts. Made by **Acme Steel Co.,** 2822 Archer Ave., Chicago 8, Ill.

For more details circle NED-2688 on enclosed inquiry slip

ALUMINUM COLD SOLDER fills blowholes and casting fractures

Smooth surface that will not crack, chip, peel or shrink in recommended service is obtained from use of Miracle No-Torch cold solder as filler material for blowholes, fractures in castings and metallic coating on patterns. Powdered aluminum in quick-drying nonsoluble liquid can be applied with putty knife. When thinned with solvent supplied by manufacturer, solder can be brushed or sprayed. It withstands acids, resists heat and smooths to feathered edge. Distributed by **A. L. Okun Co.,** 148C-26 58th Ave., Flushing 55, N. Y.

For more details circle NED-2689 on enclosed inquiry slip

FIRST AID DRESSING plastic type is flesh colored

Workers who refuse first aid treatment because they feel protective dressing is unsightly are expected to look with favor upon Band-Aid plastic strips which are flesh-colored. Made with strips of plastic adhesive tape with small pad of absorbent gauze in center, dressing sheds dirt and grease. On hand wounds, dressings can be washed along with hands. Because they are thin and elastic, dressings stay put on hard-to-bandage places. They are available individually wrapped and sterile. Made by **Johnson & Johnson,** New Brunswick, N. J.

For more details circle NED-2690 on enclosed inquiry slip

FOR VENTILATION, FUME AND DUST CONTROL AIR CONDITIONING

Light, Strong, Flexible

FLEXAUST
SPIRAL-REINFORCED HOSE

Flexaust is suitable for a wide variety of suction and pressure uses in ventilation, dust collection and fume control. **SIZES 1¼ inches to 24 inches.** Write for full information on this all-purpose hose. Various Flexaust types, accessories, and other hose types also available:

BLOFLEX
Non-reinforced collapsible

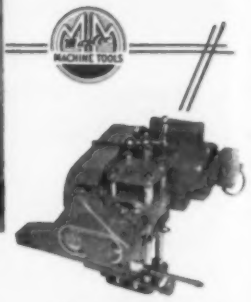
PORTOVENT
Ring-reinforced retractable

AMERICAN VENTILATING HOSE COMPANY
Dept. N-3, 100 Park Avenue, New York 17, N. Y.

For more details circle NED-2691 on enclosed inquiry slip

master MILLING • GRINDING • KEYSEATING **ATTACHMENTS**

INTERNAL KEYWAY CUTTING WITH MASTER SLOTTING HEAD ON A LATHE



Master Universal Slotting and Keyseating Head

THREE SIZES

Model "C," ½ h. p., 9" to 13" lathes
Model "B," ½ or ¾ h. p., 13" to 18" lathes
Model "M," 1 or 1½ h. p., 18" to 72" lathes

The multi-purpose Master milling, grinding and keyseating attachments increase the facilities and capacity of your lathes, turrets, or mills, in maintenance shops, tool rooms, as well as production shops. For the cost of one single purpose machine you can have several Master units producing on your present equipment.

Visit us at Booth 205, Upper North Hall A.S.T.E. Industrial Exposition

1½ H.P. MODEL "M" ON LATHE MILLING ½" KEYWAY 1 FT. PER MINUTE

WRITE FOR TWENTY-FOUR PAGE CATALOG

MASTER MANUFACTURING CO.
1318 EAST AVENUE A • HUTCHINSON, KANSAS, U.S.A.

For more details circle NED-2692 on enclosed inquiry slip

25 YEARS OF LEADERSHIP IN FASTENINGS OF STAINLESS STEEL

To YOU, Anti-Corrosive's 25th Anniversary is an assurance that the oldest, largest and best known firm dealing exclusively in stainless steel fastenings is best suited to serve your needs in this field.

Still Plenty of Fastenings IN STOCK
For quick delivery of stainless steel fastenings, check Anti-Corrosive first, since there are many stock items and alternates on hand!

FREE - A - N Fastening Selector !
Write for Slide Chart No. 52U — instantly identifies A-N Nos. pertaining to stainless fastenings, gives sizes, other data. Catalog available.

Anti-Corrosive 1927 – 1952
Metal Products Co., Inc.
Manufacturers of STAINLESS STEEL FASTENINGS
CASTLETON ON HUDSON, NEW YORK

For more details circle NED-2693 on enclosed inquiry slip

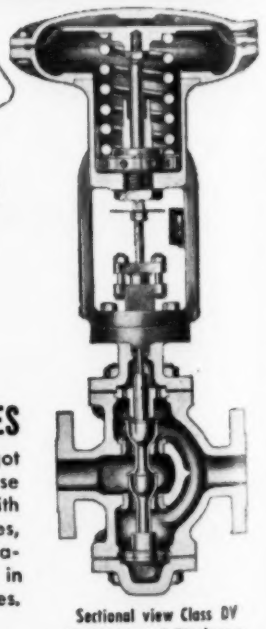
You've got a Winning Combination

with the New

TRADE **LESLIE** MARK

DOUBLE SEATED DIAPHRAGM CONTROL VALVES

Calling a spade a spade you've got a "royal flush" of features in these new Valves designed for use with control instruments. With these Valves, you get as *standard equipment,* features heretofore only obtainable in expensive, specially designed valves.



Sectional view Class DV Double Seated Diaphragm Control Valve

ESTABLISHED 1900 LESLIE CO.

WRITE FOR Bulletin 513

227 Grant Ave. • Lyndhurst, New Jersey

For more details circle NED-2694 on enclosed inquiry slip

FOLD • SEAL • MAIL

Have You Filled In Your Name and Address?

FOLD TO THIS LINE

To obtain additional information on any items in this issue of NEW EQUIPMENT DIGEST, circle numbers below which correspond with those of desired items. Your request will be forwarded promptly to manufacturer. Please give your name, title, company and address. This postage-free mailer should be folded as indicated for mailing.

	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900
	2001	2051	2101	2151	2201	2251	2301	2351	2401	2451	2501	2551	2601	2651	2701	2751	2801	2851	2901
1952	2002	2052	2102	2152	2202	2252	2302	2352	2402	2452	2502	2552	2602	2652	2702	2752	2802	2852	2902
1953	2003	2053	2103	2153	2203	2253	2303	2353	2403	2453	2503	2553	2603	2653	2703	2753	2803	2853	2903
1954	2004	2054	2104	2154	2204	2254	2304	2354	2404	2454	2504	2554	2604	2654	2704	2754	2804	2854	2904
1955	2005	2055	2105	2155	2205	2255	2305	2355	2405	2455	2505	2555	2605	2655	2705	2755	2805	2855	2905
1956	2006	2056	2106	2156	2206	2256	2306	2356	2406	2456	2506	2556	2606	2656	2706	2756	2806	2856	2906
1957	2007	2057	2107	2157	2207	2257	2307	2357	2407	2457	2507	2557	2607	2657	2707	2757	2807	2857	2907
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1965	2015	2065	2115	2165	2215	2265	2315	2365	2415	2465	2515	2565	2615	2665	2715	2765	2815	2865	2915
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1969	2019	2069	2119	2169	2219	2269	2319	2369	2419	2469	2519	2569	2619	2669	2719	2769	2819	2869	2919

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1982	2032	2082	2132	2182	2232	2282	2332	2382	2432	2482	2532	2582	2632	2682	2732	2782	2832	2882	2932
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1986	2036	2086	2136	2186	2236	2286	2336	2386	2436	2486	2536	2586	2636	2686	2736	2786	2836	2886	2936
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1993	2043	2093	2143	2193	2243	2293	2343	2393	2443	2493	2543	2593	2643	2693	2743	2793	2843	2893	2943
1994	2044	2094	2144	2194	2244	2294	2344	2394	2444	2494	2544	2594	2644	2694	2744	2794	2844	2894	2944

FOLD ON THIS LINE

1995	2045	2095	2145	2195	2245	2295	2345	2395	2445	2495	2545	2595	2645	2695	2745	2795	2845	2895	2945
1996	2046	2096	2146	2196	2246	2296	2346	2396	2446	2496	2546	2596	2646	2696	2746	2796	2846	2896	2946
1997	2047	2097	2147	2197	2247	2297	2347	2397	2447	2497	2547	2597	2647	2697	2747	2797	2847	2897	2947
1998	2048	2098	2148	2198	2248	2298	2348	2398	2448	2498	2548	2598	2648	2698	2748	2798	2848	2898	2948
1999	2049	2099	2149	2199	2249	2299	2349	2399	2449	2499	2549	2599	2649	2699	2749	2799	2849	2899	2949

PLEASE FILL IN COMPLETELY—PRINT OR TYPEWRITE

—USE THIS SLIP FOR MARCH 1952 ISSUE ONLY—

32

NAME ..... TITLE .....

COMPANY ..... Approx. Number of Employees .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
- ☐ Under $75,000

FIRST CLASS
PERMIT NO. 36
Sec. 34.9 P. L. & R.
Cleveland, Ohio

BUSINESS REPLY ENVELOPE
No Postage Stamp Necessary if Mailed in the United States

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NEW EQUIPMENT DIGEST
Penton Building
CLEVELAND 13, OHIO

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Please send NEW EQUIPMENT DIGEST to me each month free of charge.

NAME ..... TITLE .....

COMPANY .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

..... Approximate Number of Employees in Plant .....

Also send NEW EQUIPMENT DIGEST free to the following men in our company:

NAME ..... TITLE .....

NAME ..... TITLE .....

When is a lathe too big?

A lathe is too big when:

SHELDON
CHICAGO

TS56B
11¼" Swing

(1) When it is too large and complex for any but the most experienced to operate safely.

(2) When the power cost is excessive for the tool load.

(3) When the tool investment is out of all proportion to the requirements.

(4) When it is too cumbersome and too slow.

(5) When it takes up floor space, heat and light in which output could be multiplied with smaller machine tools.

Modern Sheldon Precision Lathes, eliminate these excess costs and loadings on many everyday operations—leaving far more on the profit side. 10"—11" and 13" Swing. "Zero Precision" Tapered Roller Bearings. Increased collet capacity.

Write for catalog.

Sheldon Machine Co., Inc., 4215 N. Knox Ave., Chicago 41, Ill.

▲ For more details circle **NED-2695** on enclosed inquiry slip ▲

SPECIAL FINISH OF CARBON STEEL TUBE SOLVES MANUFACTURING PROBLEM

SMOOTH surface, free from pits and scratches, plus rigidity, were prime requirements of a manufacturer of telescopic sights for sporting and target rifles. Like most Superior customers they got exactly what they sought without the need for specifying "premium" tubing. Superior experience backed by highly developed production equipment and extensive research and testing facilities helped solve this production problem.

YOU, TOO, may have a problem involving the use or application of fine small tubing. Superior can help you find the solution. Check your needs against our production of tubing in all analyses from .010" to ⅝" O.D. and in certain analyses (.035" max. wall) up to 1⅜" O.D. For information write today.

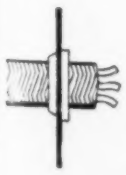
SUPERIOR TUBE COMPANY
2018 Germantown Avenue
Norristown, Pennsylvania

▲ For more details circle **NED-2696** on enclosed inquiry slip ▲

C-D-F MAKES IT...

The Grommet that Springs out and

HOLDS TIGHT!



• The aircraft industry needs thousands of grommets for wires and cables passed through bulkheads. C-D-F offers this unique answer:

Fine weave canvas C-D-F Dilecto rolled tubing is cut into rings. Each ring is grooved and beveled on its outer diameter, then slit diagonally.

Result: Plastic grommets that are easily compressed and inserted by hand. The built-in tension of the tough Dilecto ring makes it spring outward, tight against the edge of the hole . . . cushioning?..insulating...saving assembly time!

DILECTO is mechanically and dielectrically strong. Resistant to high heat, hot oil, excessive humidity. C-D-F sells it in sheets, tubes, rods in a wide range of grades . . . also handles complete fabrication on high speed machines. Write now for sample grommet and Dilecto catalog!

Continental-Diamond Fibre Company
NEWARK 30, DELAWARE

▲ For more details circle **NED-2697** on enclosed inquiry slip ▲

New Processes & Materials

FLOOR RESURFACING MATERIAL applied over wood or concrete

Dense, stone-like surface of fine, smooth texture can be obtained by application of Saf-T-Flor floor resurfacing material over any solid wood or concrete floor. Fireproof material hardens overnight and is available in light gray, tile red, russet brown and green. It is impervious to solvents, moisture, oil and grease. Application is by troweling in thicknesses of ⅜ to ½-in. over wood floors and ½-in. over concrete. Made by **Monroe Co.**, Dept. M-1, 10703 Quebec Ave., Cleveland 6, O.

▲ For more details circle **NED-2698** on enclosed inquiry slip ▲

PLASTIC TARPAULIN resists weather, abrasion, chemicals

Machinery, materials and other items can be protected from elements by tarpaulins made of 10-gage DuPont Vinylite. They are water, crack and peelproof; resistant to abrasion, motor oils and most chemicals; and have weight about one-half that of duck tarpaulins. Warping or shrinking does not occur after prolonged exposure to wide temperature fluctuations. Noninflammable material has 200-lb tensile strength and is made in various sizes in navy blue and aluminum gray sunproof opaque colors. Available from **American Agency**, Dept. 22, 799 Broadway, New York 3, N. Y.

▲ For more details circle **NED-2699** on enclosed inquiry slip ▲

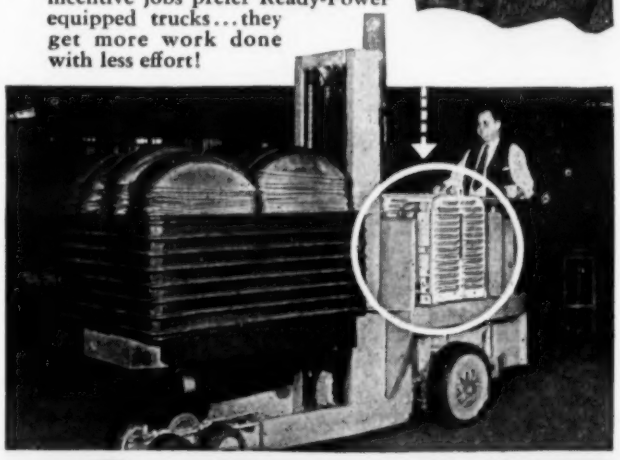
CORROSIONPROOF DUCTING SYSTEMS are fabricated entirely of plastics

Ducting systems for chemical plants, made of tough corrosion - resistant plastic, are fabricated to suit application. Tanks, trays, hoppers, feeders, fume exhaust hoods, washers, stacks and gutters are being engineered specifically to handle acids, alkalies, alphatic hydrocarbons and other basic chemicals. Uscolite material used is a blend of styrene plastic and acrylonitrile rubber which combines dimensional stability, toughness and chemical resistance. Reinforcing ribs, joints and corners are extruded plastic. Sheet to form sides, tops and bottoms are of the same material. Rivets are injection molded plastic, while bolts are machined from extruded stock. Joints are solvent welded with same plastic in solution to form an airtight joint. Full information available from **United States Rubber Co.**, Mechanical Goods Div., 1207 Rockefeller Center, New York 20, N. Y.

▲ For more details circle **NED-2700** on enclosed inquiry slip ▲

"My Choice? READY-POWER DRIVE ...Every Time!"

Ready-Power Drive is full electric drive featuring simple handling and full control, but with no limit to the hours of operation at peak efficiency. No wonder operators on incentive jobs prefer Ready-Power equipped trucks...they get more work done with less effort!



Remember . . . Your Truck Is No Better Than Its Power!

CONTINUOUS-DUTY POWER UNITS

The READY-POWER Co.
3832 Grand River Ave., Detroit 8, Michigan
Manufacturers of Gas and Diesel Engine-Driven Generators and Air Conditioning Units; Gas and Diesel-Electric Power Units for Industrial Trucks

▲ For more details circle **NED-2701** on enclosed inquiry slip ▲

ASK FOR Wood's **"SURE-GRIP" V-BELTS**

..."they're right in the groove"

V-Belts for all drive conditions. "Sure-Grip" standard, industrial type belts, in all sizes and sections, for general applications; Fractional Horsepower belts for the lighter drives; Open End V-Belts for "fixed center" drives; and Steel Cable V-Belts, for greater capacities, on drives where clearances limit the number of belts that may be used.

SEND FOR CATALOG 192

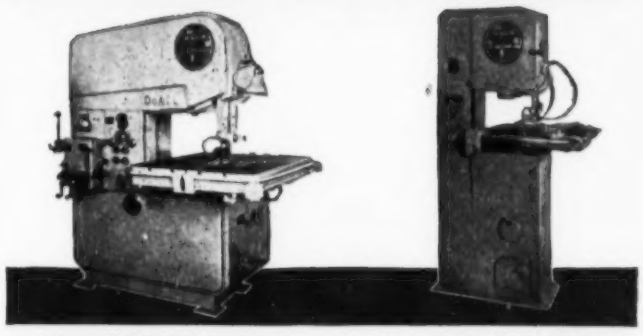
MECHANICAL POWER TRANSMISSION MANUFACTURERS SINCE 1857

T. B. WOOD'S SONS CO.
CHAMBERSBURG, PA.

Branches: Boston, Mass., Newark, N. J., Dallas, Tex., Cleveland, O.

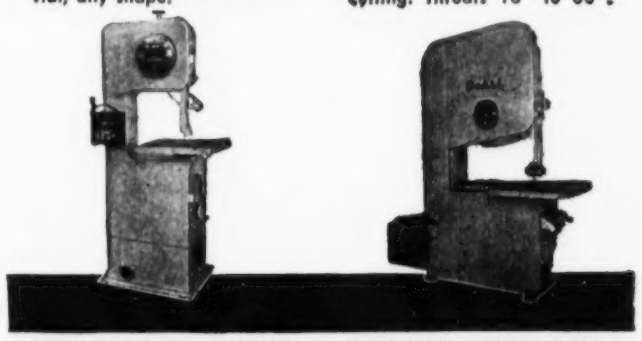
▲ For more details circle **NED-2702** on enclosed inquiry slip ▲

There is a DoALL BAND MACHINE to suit every purpose ...every pocketbook



THE "CONTOUR-MATIC"— The features and capabilities of all other models plus hydraulic controls, wider speed range, more power, greater tool variety. Cuts any material, any shape.

"ML" CONTOUR MACHINES —Five models—Precision machines for general purpose band sawing, filing, polishing. 50 to 1500 F.P.M. variable speed for conventional metal cutting. Throats 16" to 60".



"UTILITY" BAND SAWING AND FILING MACHINES— Four models—16" throat. Two speed range 50 to 350 F.P.M. and 860 to 5200 F.P.M. Also available fixed speed. For small shops and experimental or model work in large shops.

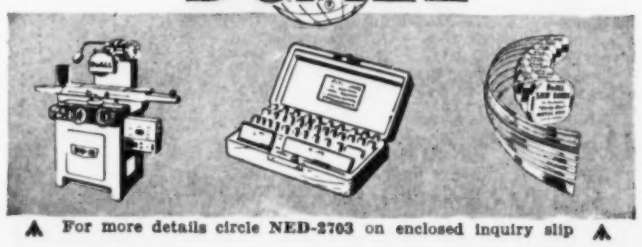
HIGH SPEED "ZEPHYR" MACHINES—High speed 500 to 15000 F.P.M., fixed or variable. 16" to 60" throats. For high speed sawing of non-ferrous metals and non-metallics, friction cutting ferrous sheet, plate up to 1".

EVERY SHOP can have the benefits of DoALL band machining, the fast, economical process that "slices" material apart instead of reducing it to pile of chips. There is a DoALL Band Machine and Band Tool for precision cutting every material, every shape—sawing, line grinding, polishing, honing, friction sawing, cutting. For production, maintenance, toolmaking—a DoALL will save manhours, material and money, free other machines for work to which they are better suited. Call your local DoALL Sales-Service Store for a free demonstration. Ask for literature.

THE DoALL COMPANY, 254 N. Laurel Ave., Des Plaines, Ill.

B-3½

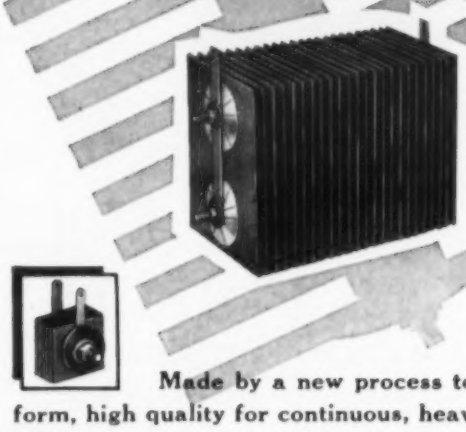
INDUSTRY'S NEW TOOLS **DoALL** 33 SALES-SERVICE STORES



▲ For more details circle **NED-2703** on enclosed inquiry slip ▲

SYNTRON

SELENIUM RECTIFIERS



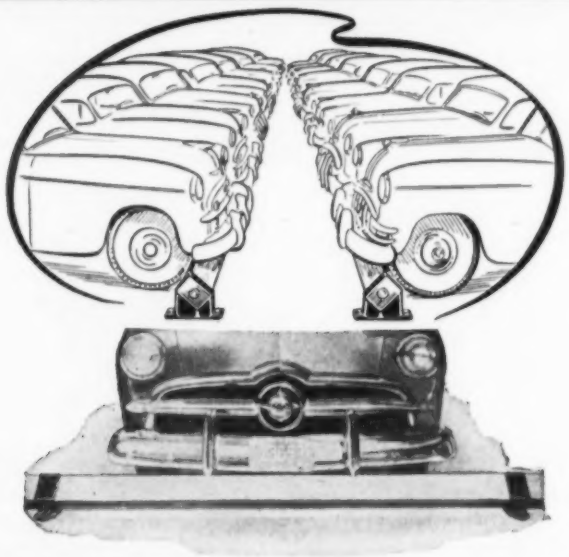
Made by a new process to a uniform, high quality for continuous, heavy-duty service.

One inch square to 12- by 16-inch cells in standard stacks or for customer assembly.

Write For FREE Catalog Folder

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

For more details circle NED-2705 on enclosed inquiry slip



SALIENT FEATURES OF HAR-BAR BARRIERS

1. High enough to stop your car.
2. Low enough to clear your bumper guards.
3. Barrier is above ground — no drainage problem.
4. Barrier is above ground — no rotting of wood.
5. Automatically spaces your cars.
6. Follows contour of your ground.
7. Easily installed — just line up and drive the anchor pins.
8. Easily moved — just pull the anchor pins.
9. Easy to clean under.
10. Easy to maintain.
11. Installed on any kind of surface — black top, cement, macadam, gravel or cinders.
12. It really dresses up your parking lot.
13. You always stop against your tire—no shock.

Send us a plot plan of your parking lot—we do the engineering free.

HARRIS-BARRIER INC. 6407 N. PENNSYLVANIA STREET INDIANAPOLIS 6 - INDIANA

For more details circle NED-2706 on enclosed inquiry slip

New Conveyor Uses "Natural Frequency" to CUT POWER COSTS IN MOVING MATERIALS

Conveys Bulk or Packaged Material Horizontally or up Incline to 10°... Only 14¼" Headroom... Few Working Parts

Natural frequency vibration and regeneration of power through coil springs provide *improved conveying* and *greater economy* in materials handling. S-A Conveyor has balance frame which compensates trough action and absorbs vibration...no expensive mounts needed. Low power requirement . . . easy to clean and maintain . . . quiet and dependable in operation.

Ask for Bulletin 950

1901-1951

50 years experience with bulk handling

STEPHEN S-A ADAMSON MFG. CO.

12 Ridgeway Ave., Aurora, Ill. Los Angeles, Calif. • Belleville, Ont.

DESIGNERS AND MANUFACTURERS OF ALL TYPES OF BULK MATERIALS HANDLING EQUIPMENT

For more details circle NED-2707 on enclosed inquiry slip

New Processes & Materials

FLEXIBLE HOSE for abrasive dust collection

Lightweight, extremely flexible Flexaust hose made with neoprene compounds and laminated nylon chafer duck is designed for pressure and vacuum services in operations involving abrasive dust collection, heavy flexing and gravity feeds. Inside diameter sizes range from 1½ to 24 in. Availability is from two to four weeks. Made by **American Ventilating Hose Co.**, Dept. NA, 100 Park Ave., New York 17, N. Y.

For more details circle NED-2708 on enclosed inquiry slip

MOTOR CLEANING SOLVENT flash point of 140° F is constant

Formulated as a substitute for carbon tetrachloride, FO-128 liquid cleaning solvent for electric motors and equipment has flash point of 140° F which remains constant throughout evaporation cycle. Drying time is similar to Stoddard solvent. Product bears U. S. Coast Guard Certificate No. 340 which states that it is safe as an article of stores on board vessels. Solvent is available in 5 and 53-gal drums. Made by **Fine Organics, Inc.**, Aviation-Industrial Chemicals Div., 211N E. Nineteenth St., New York 3, N. Y.

For more details circle NED-2709 on enclosed inquiry slip

RESIN-GLASS FIBER PRODUCTS are lightweight, chemical-resistant

Acid tanks, pipe, pit linings, plating barrels, vent hoods, fume ducts, coatings and dye-house trucks are among many available products fabricated from chemically-resistant Pla-Tank resin-bonded Fiberglas. Products are formed of Fiberglas mat impregnated and bonded with polyester resins to form one-piece unit which is strong, lightweight, resilient and resistant to most common acids, plating solutions, solvents, alkalies and bleaches. Pipes and ducts made with material withstand temperatures from −60° to 275° F and have working pressure of 100 psi with bursting strength of over 300 psi. Bell ends facilitate making joints which are welded by wrapping resin-soaked mat around joint and allowing it to dry. Made by **Chemical Corp.**, 99 Waltham Ave., Springfield 9, Mass.

For more details circle NED-2710 on enclosed inquiry slip

The Case Of The Haunted Engineer

Today—find out how WEKSLER can make things smoother in YOUR plant! Ask your jobber for Important Free Bulletin AA50 or write to:

"Industrial America's Right Arm"

WEKSLER THERMOMETER CORPORATION
52-56 W. Houston St., N. Y. 12, N. Y.

For Industrial Thermometers Send for Catalog 125.
For Glass Engraved on Stem Thermometers and Hydrometers, Send for Catalog 225.
For Dial Indicating and Recording Thermometers, Send for Catalog 325.
For Dial Indicating and Recording Pressure Gauges, Send for Catalog 525.

For more details circle NED-2711 on enclosed inquiry slip

Like a *FAST* V-8 It can really *Pick-up*

Something NEW In a Lifting Magnet

Here is a money-making scrap magnet. Picks 'em up and lays 'em down. Hour after hour, week after week, year after year. Endurance and strength second to none. FEATURES LIGHT WEIGHT AND WELDED CONSTRUCTION and many more advantages worth investigating.

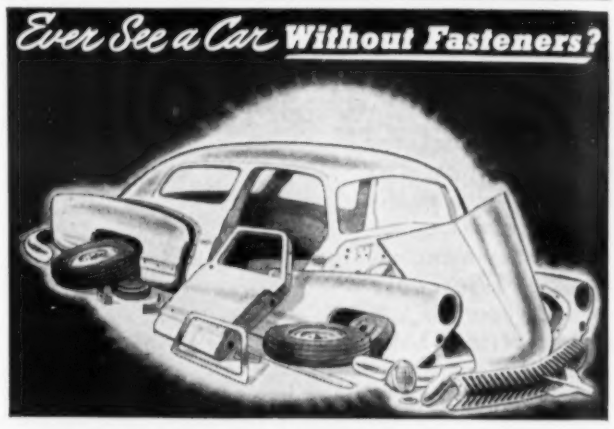
HOW TO GET LIFT THAT LASTS

SEND FOR CATALOG B-1401-A . . . the whole story on features, capacities, ratings, dimensions — what makes this magnet different, improvements that only Dings — the pioneer magnet builder — offers. Write today.

DINGS MAGNETIC SEPARATOR CO.
4758 West Electric Avenue • Milwaukee 46, Wisconsin

For more details circle NED-2712 on enclosed inquiry slip

Ever See a Car **Without Fasteners?**



Approximately 2-1/2% of the steel produced is used to fasten the rest together!

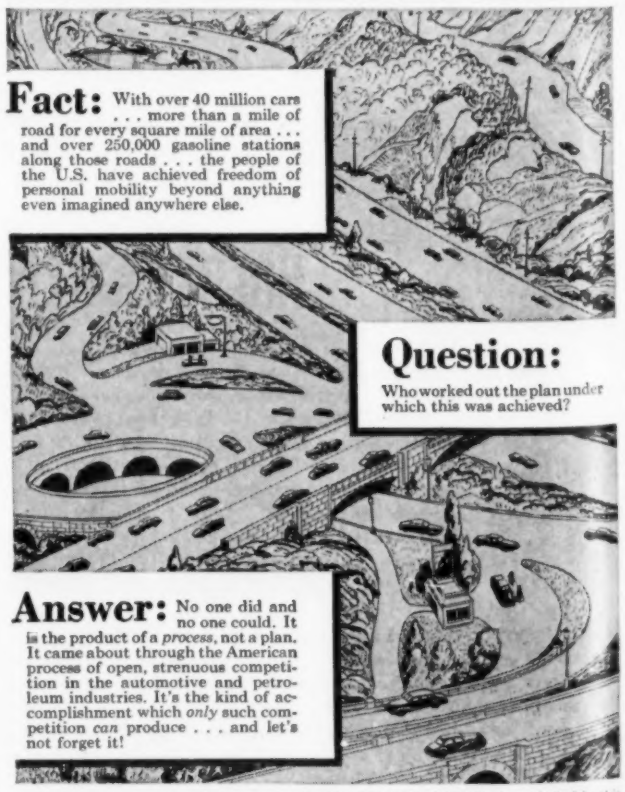
You wouldn't give much for a car like this, would you? Yet that's the way it would look without fasteners.

Yes, fasteners *are* important. That's why it pays to select bolts and nuts for your product as carefully as you select the finish.

Lamson & Sessions

The LAMSON & SESSIONS Co., General Offices: 1971 West 85th Street • Cleveland 2, Ohio
Plants at Cleveland and Kent, Ohio • Birmingham • Chicago

For more details circle NED-2713 on enclosed inquiry slip



Fact: With over 40 million cars . . . more than a mile of road for every square mile of area . . . and over 250,000 gasoline stations along those roads . . . the people of the U.S. have achieved freedom of personal mobility beyond anything even imagined anywhere else.

Question: Who worked out the plan under which this was achieved?

Answer: No one did and no one could. It is the product of a *process*, not a plan. It came about through the American process of open, strenuous competition in the automotive and petroleum industries. It's the kind of accomplishment which *only* such competition *can* produce . . . and let's not forget it!

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The competitive system delivers the most to the greatest number of people

For more details circle NED-2714 on enclosed inquiry slip

PRESTO LIGHTER SAYS:

"... and our finishing costs have come **tumbling** down."

TUMB-L-MATIC helped Presto Lighter... TUMB-L-MATIC can help you

Presto Lighter Co., was unfamiliar with and skeptical about cutting finishing costs with Tumb-L-Matic methods. They asked to be shown. Tumb-L-Matic engineers analyzed a sample lighter and then recommended an individualized low-cost Tumb-L-Matic Process. Result... "finishing costs have come tumbling down."

Tumb-L-Matic is a proved process which scientifically combines equipment, compounds, supplies and techniques to produce revolutionary developments in defining, cutting, smoothing and polishing metal products regardless of size or shape.

TRY IT BEFORE YOU BUY IT

Let our engineers analyze a sample (or detailed description) of your product, recommend an individualized, low-cost TUMB-L-MATIC PROCESS. Complete production data lets you figure finishing costs before you invest a cent. Send for Bulletin.

TUMB-L-MATIC, INC.
FORMERLY LUPOMATIC INDUSTRIES
7618 4510 BULLARD AVENUE • NEW YORK 70, N. Y.

For more details circle NED-2715 on enclosed inquiry slip

IT'S THE *Usable Production* THAT COUNTS—

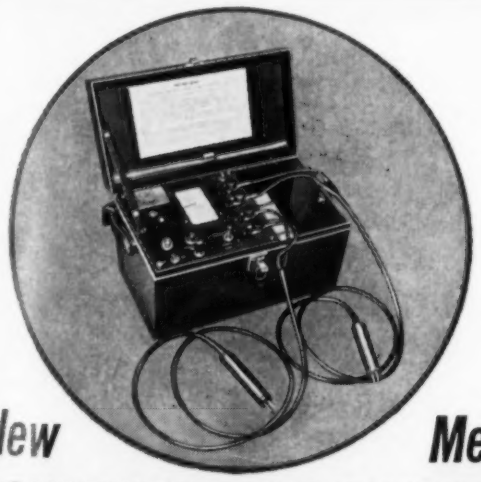
...More and More, it's Motch & Merryweather SEGMENTAL SAW BLADES for cutting off LARGER STOCK!

Faster cutting with accuracy and safety—that means higher *usable* production. Get these results every time with the Triple-Chip Method and M. & M. segmental saw blades. Our "Hi-Lo" alternately wide-and-narrow tooth grind breaks up chip loads, disperses strains, minimizes breakage, hangs up new production records in cutting off large stock.

Get our Circular Sawing Handbook.

THE MOTCH & MERRYWEATHER MACHINERY CO.
PENTON BUILDING • CLEVELAND 13, OHIO
COMMAND OUR UNPARALLELED EXPERIENCE IN CIRCULAR SAWING . . .

For more details circle NED-2716 on enclosed inquiry slip



New *Megger*®

LOW RESISTANCE OHMMETERS

More Convenient for Field Use

New model available in two styles • Model IB carries batteries • Model IR has built-in rectifier which plugs into any ordinary lighting circuit outlet • Both have same ranges, 0-1000 and 0-10,000 microhms. Case accommodates instrument complete with leads and prods, and batteries or rectifier. Weighs only 19 lbs. Write today for BULLETIN 24-46-D. B 808

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

For more details circle NED-2717 on enclosed inquiry slip

New Processes & Materials

SAFETY AIR HOSE
eliminates power line short circuits

Accidents caused by air hoses on pneumatic equipment coming in contact with hidden power lines can be eliminated by use of Invincible safety air hose. At a deliberate short circuit with current reading of 2250 amp and 480 v, hose became warm, but tripped circuit breaker within 1 second. Hose was not warm enough to be uncomfortable to hold. It has 832 strands of braided copper ribbon as current carrying medium bonded in carcass of hose which resists oil, abrasion and heat. Hose is made in ½-in. ID size in four and five-ply construction by **Mercer Rubber Corp.**, 68 Reade St., New York 7, N. Y.

For more details circle NED-2718 on enclosed inquiry slip

FLAT WHITE ENAMEL
dries to smooth nonsheen finish

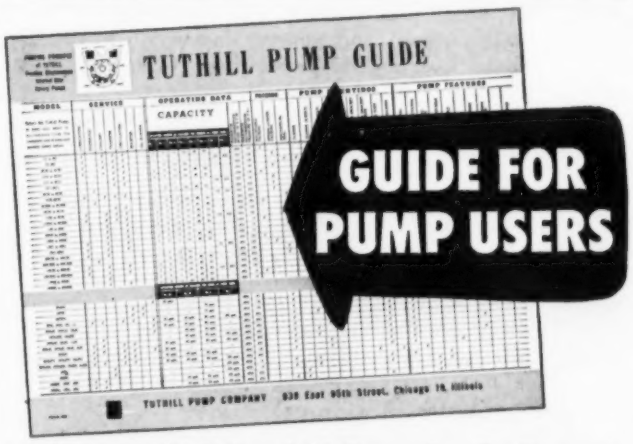
Combining soft appearance of flat paint with hardness of enamel, Dulux Super-White flat enamel for walls, trim and woodwork dries overnight to smooth, velvety finish with no side sheen. Surface is tough, smudge resistant and can be washed freely. Tests indicate enamel has good hold-out and hiding properties, laps well, has freedom from sagging, flows and brushes well and resists yellowing. Made only in intense white, enamel can be tinted to light pastel shades without increasing sheen and without streaking. Developed by **E. I. du Pont de Nemours & Co.**, Finishes Div., Dept. NED, Wilmington 98, Del.

For more details circle NED-2719 on enclosed inquiry slip

FLUORESCENT MATERIALS
used with ultra-violet lighting

Line of fluorescent materials adaptable for exhibits, lectures, charts, industrial inspection markings, pass-out checks and identifications, and for theft protection are available for use with Blak-Ray tubes and fixtures or other black light sources. Accessories include marking pens, invisible ink stamp pads, wire, yarn, ribbon, crayons, invisible tracer pastes and powders, fabrics, papers, cardboards and colored sands. Also included are water colors and bulletin paints of visible daylight colors and invisible though not transparent types which appear white to cream in ordinary light and glow brilliantly under the Blak-Ray. Paints can be brushed, sprayed or silk-screened. A third type for temporary applications which can be wiped off with dry cloth is also available. Produced by **Ultra-Violet Products, Inc.**, 143 Pasadena Ave., South Pasadena, Calif.

For more details circle NED-2720 on enclosed inquiry slip



Helps you find the right Pump for the Purpose

As a practical help to pump users, Tuthill has developed a simple, easy-to-use reference sheet which gives all the facts you need to select the pump best suited for your requirements. This data includes types of service, pump models, capacities, pressures, speeds, packing, mountings—all features to give you the necessary details to select the exact pump for your purpose.

Write for your copy of this helpful guide today.

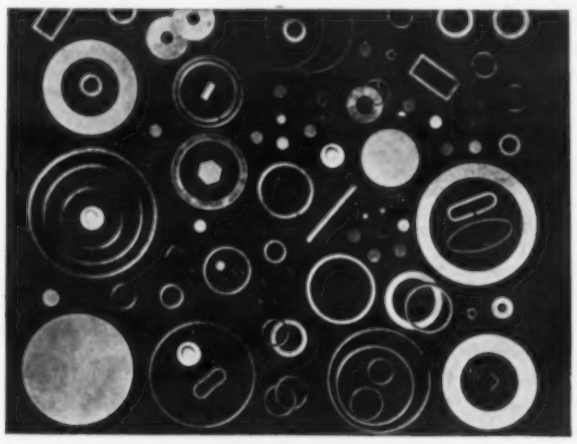
25th Anniversary

TUTHILL PUMP COMPANY
939 East 95th Street • Chicago 19, Illinois

For more details circle NED-2721 on enclosed inquiry slip

KRE-CO PREPLACED BRAZING ALLOYS LOWER JOINING COSTS

For speedier production and leak-tight joints stronger than the parent metal. Made from Easy-Flo, Sil Fos, Copper, Phos Copper, Bronze, Soft Solder and Aluminum in rings, disks, flat washers, stampings, and special shapes and sizes to meet all requirements. Speedy deliveries in any quantity. Interesting quotations. Tell us to present facts and figures to lower your brazing costs.



CHARLES W. KRIEG COMPANY
48-60 Dickerson St. • HUmboldt 5-2000 • Newark 4, New Jersey

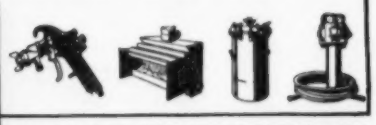
For more details circle NED-2722 on enclosed inquiry slip

SPRAY PAINTING BOOTHS
all types and sizes

Binks makes a size and type of spray booth for every shop...from small bench type models to giant Dynaprecipitor water-wash booths. All are correctly engineered to remove fumes and overspray efficiently. And all conform with requirements of fire, health and state authorities.

SEND FOR CATALOG-DATA BOOK No. 955 that describes the entire line in detail. No obligation. Write Binks Manufacturing Co., 3122-34 West Carroll Ave., Chicago 12, Ill.

Binks *EVERYTHING FOR SPRAY PAINTING*

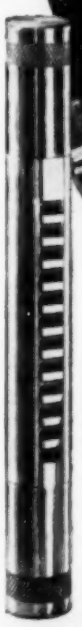


GUNS • SPRAY BOOTHS • MATERIAL TANKS • EXTRACTORS & ACCESSORIES

REPRESENTATIVES IN PRINCIPAL U. S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

For more details circle NED-2723 on enclosed inquiry slip

PRECISION KEYWAYS with an *ADJUSTABLE* GLENNY PUSH BROACH



Production or short-run keyway cutting can be accomplished in all types of bushings, sleeves, gears, etc., with the GLENNY adjustable push broach. Featuring 0.0005-inch accuracy, it can be instantly adjusted and micrometer checked for precision operations.

SPECIFY GLENNY . . . greater strength . . . maximum accuracy . . . fully adjustable for depth . . . interchangeable high-speed blades . . . bushing adapters available . . . will cut tapered keyways . . . hardened tool-steel external parts . . .

GLENNY broach sets are available for cutting keyways in bores ranging in diameter from ¼ to 2½ inches.

181 KM

KASE MACHINE COMPANY
18534 Buffalo Avenue
Cleveland 19, Ohio

KASE MACHINE COMPANY
Please send (without obligation) your new Bulletin No. 13 containing sizes, specifications and prices of GLENNY broaches and kits.
NAME _____
COMPANY _____ TITLE _____
STREET _____
CITY _____ ZONE _____ STATE _____

For more details circle NED-2724 on enclosed inquiry slip

- Temperatures to 400°
- Fine silver contacts
- Ceramic & Fiberglas insulation
- Alnico V Permanent Magnet
- 10 amps. at 110 volts; 5 amps. at 220 volts, A. C.
- Direct loads up to ¼ h.p., A. C. ratings

MORE and more designers are finding the Bell Switch just what they need to solve their control problems. The Bell Switch is a 100% positive snap action, magnetic proximity switch that is adaptable to any application where switch must be actuated through sealed barriers. Among the many applications in which it has been so successfully employed are cutoffs for all kinds of systems, counting devices, signal alarms and operation of automatic machinery. In addition to standard models, the Bell Switch is available in immersion-proof and splash-proof models to meet the demands of even the most severe services.

Write for Detailed Information Concerning Sizes, Specifications and Application.

JO-BELL PRODUCTS, INCORPORATED
4840 So. St. Louis Ave. • Chicago 32, Illinois
Liquid Level Controls • Carbonators • Magnetic Switches • Special Controls

▲ For more details circle NED-2725 on enclosed inquiry slip ▲

WHICH DO YOU DO?

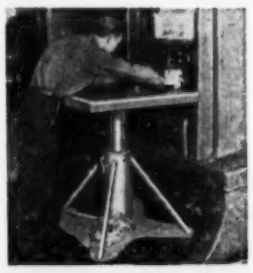
LOADING & UNLOADING
SHEET FEEDING
WORK POSITIONING
DIE HANDLING

RAYMOND

PORTABLE *Hydraulic* ELEVATING TABLE

FITS ALL FOUR!

No table has so many practical uses as this RAYMOND Portable Hydraulic Elevating Table! Use it for positioning or handling throughout the plant . . . see how it lightens your work load. RAYMOND Hydraulic Elevating Table has sturdy 30" square top which can be rotated when desired.



Convenient foot pump simplifies raising and lowering, leaves operator's hands free. Smooth-rolling casters make table highly portable. Floor lock holds it securely in place. Standard Model elevates from 28" to 44"; Telescopic Model from 28" to 50". Both models have 2,000 lb. capacity.

SEND FOR BULLETIN 232

. . . it gives you the facts on this RAYMOND Portable Hydraulic Elevating Table. Write for it today.

RAYMOND

ELECTRIC INDUSTRIAL TRUCKS • HYDRAULIC ELEVATING EQUIPMENT

The RAYMOND CORPORATION
Formerly LYON-Raymond Corporation
4169 Madison St., Greene, N.Y.

▲ For more details circle NED-2726 on enclosed inquiry slip ▲

New Literature and Catalogs

Water Hammer in Pipelines

Williams Gauge Co.—Water hammer can cause considerable damage as well as annoyance. What causes it and steps to be taken to prevent it are told clearly and in nontechnical language in 8-page illustrated bulletin WH-851. The hydraulic elements involved in water hammer piping, instrument and water systems are discussed. Silent type check valves are described and their applications shown.

▲ For more details circle NED-2727 on enclosed inquiry slip ▲

Pressure, Flow & Combustion Instruments

F. W. Dwyer Mfg. Co.—Advance type slack tube manometers, magnehelic gages, Visi-Float air filter gages, hook and smoke gages and other instruments for measuring positive or differential pressure, vacuum, velocity, flow or temperature of gases and fluids in laboratory, field or industrial plant applications are covered by 12-page illustrated catalog "Dwyer Instruments for Science and Industry."

▲ For more details circle NED-2728 on enclosed inquiry slip ▲

Elevating Tables

Raymond Corp.—Line of hydraulic elevating tables for die handling, work positioning or strip and sheet feeding operations is described and illustrated, and specifications given, in 4-page bulletin No. 206. Tables have capacities from 2000 to 20,000 lb and various ranges of elevation.

▲ For more details circle NED-2729 on enclosed inquiry slip ▲

Air Conditioning Units

Buffalo Forge Co.—Model G air conditioning cabinets described in illustrated bulletin 3703A are available in both horizontal and vertical models in sizes from 875 to 22,000 cfm of conditioned air. Air conditioning, cooling, dehumidifying, winter heating and air cleaning can be obtained from units. Bulletin includes capacity tables, diagrams and charts.

▲ For more details circle NED-2730 on enclosed inquiry slip ▲

Hand Lift Trucks

Barrett-Cravens Co.—Complete specifications on line of single stroke hand lift trucks are found in bulletin 5110. Single stroke of handle lifts capacities ranging up to 4000 lb. Mechanical features are detailed and illustrated in 8-page bulletin.

▲ For more details circle NED-2731 on enclosed inquiry slip ▲

Electronic Transmission

Swartwout Co.—Autronic principle and how Autronic control system utilizes electronics for automatic measurement and control of such process variables as temperature, pressure, level and flow are explained in 6-page presentation "Electronic Transmission and Control." Components of system and system circuit diagram are included.

▲ For more details circle NED-2732 on enclosed inquiry slip ▲

Instruments & Industry

Minneapolis-Honeywell Regulator Co., Brown Instruments Div.—"Tomorrow Is Today" is title of 20-page illustrated brochure that relates importance of process instruments to defense and general industry. It brings out point that instruments accelerate research, speed production and contribute to better living.

▲ For more details circle NED-2733 on enclosed inquiry slip ▲

Spark-Resisting Tools

Ampco Metal, Inc.—Made of Ampco metal, beryllium copper or Monel, line of spark-resisting tools described in 4-page catalog ST-5 can be used with safety where inflammable and explosive products are present. Over 400 tools are in stock, including wrenches, chisels, screwdrivers, pliers, shovels and hammers.

▲ For more details circle NED-2734 on enclosed inquiry slip ▲

Building Corrosion Resistant Floors

U. S. Stoneware Co.—Detailed instructions on "How To Build Corrosion Resistant Floors" are published in 16-page illustrated bulletin AB17. Uses of acid brick, different types of cement and drawings of various types of floors are included.

▲ For more details circle NED-2735 on enclosed inquiry slip ▲

Packaged Steam Generators

An illustrated 204-page architects' and engineers' manual on Steam-Pak packaged steam generators contains data for laying out and writing specifications for boiler installations for applications requiring high pressure or low pressure steam or hot water. Included are many color drawings showing applications, along with specifications for that installation. Complete specs are given for each unit in line ranging from 15 to 250 hp. Also included are electrical wiring diagrams and Steam-Pak output charts. Sent only on letterhead request to York-Shipley, Inc., 85 Jessop Pl., York 4, Pa.

▲ For more details circle NED-2736 on enclosed inquiry slip ▲

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IS THE IDEAL PACKING MATERIAL

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(1) Real dollar & cents savings
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INDUSTRIAL SHREDDER & CUTTER CO.
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▲ For more details circle NED-2737 on enclosed inquiry slip ▲

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COOL TOOLS BEST WITH "FULFLO" TRADE MARK REG. U. S. PAT. OFF.

CENTRIFUGAL COOLANT PUMPS

HERE'S WHY THEY BELONG ON YOUR EQUIPMENT

- constant pumping action
- spring tension packing
- no bearing in shaft
- carbon seal, if desired
- automatic adjustment

Direct or motor drive
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MODEL FVM *vertical*
MODEL FHM *horizontal*
Flanged mount; ¼ hp; 30 gal per min., mechanical seal

SEND TODAY (on your letterhead) for FULFLO MECHANICAL DATA BOOK

FULFLO THE FULFLO SPECIALTIES CO. Inc.
BLANCHESTER, OHIO

▲ For more details circle NED-2738 on enclosed inquiry slip ▲

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▲ For more details circle NED-2739 on enclosed inquiry slip ▲

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1952-230 PG. CATALOG

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Stationary or Portable ARC WELDER — 97.50

Delivers 300 Amps., continuous — or 300 to 400 Amps., intermittent. Designed to weld continuously for hours . . . This unit is built around a rugged, heavy duty, aircraft type generator and comes complete with pulley reactor, output controls, switches and a rheostat mounted on sturdy steel frame. Operates on 15 H.P. for maximum output. Gas or electric motor. For light or heavy industrial work.

HYDRAULIC PUMP & CYLINDER SPECIALS

Hyd. Variable Displacement PUMP — 32.50

Will deliver maximum volume at any pressure setting between 600 and 900 P.S.I. Pump housing serves as reservoir for system. Has built-in compressed air super-charger which makes system independent of outside atmospheric pressure. Rotation is left hand only. Maximum speed for continuous duty is 3750 R.P.M. Displacement is .484 cu. in. per revolution, or approximately 4 G.P.M. at 1750 R.P.M. . . . . .

Special! HYDRAULIC CYLINDER — 29.95

Gives 20,000 lbs. thrust (push or pull) using 1500 PSI line pressure as obtained from our hydraulic pumps. Will produce up to 40,000 lbs. thrust with 3000 PSI. Can also be used on low pressure air systems. 4" bore; 18" stroke; 30½" length. Ideal for road-farm — shop machinery, etc.

P-3 STRATO POWER PUMP — 19.50

With built-in variable flow control valve in head. Positive displacement piston type. Displacement capacity: 2 gal. per min. at 1500 RPM at 1250 PSI. Pressure limit 1250 PSI continuous. 1400 PSI for 15 sec. Operates at 3750 RPM, intermittent max. 4500 RPM. Rotates either direction without adjustment . .

No. 3 HYDRAULIC CYLINDER — 5.75

Double action. Bore is 1" — Shaft ½". Has stroke of 2½" to 4". Stroke can be adjusted with internal sleeve stops. Overall length is 8½". Will take 1500 lbs. continuous duty, 3000 lbs. intermittent. Will lift or push up to 1100 lbs.

P-4 VICKERS ANGLE PUMP — 19.49

Positive displacement type, angle piston. Displaces .507 cu. in. per revolution. Has capacity of 6 gal. per min. at 3000 RPM at 1500 PSI, continuous, 1875 for 15 sec. Operating speed of 3750 RPM, intermittent maximum, 4500 RPM. Rotates to the right only.

FOUR WAY VALVE — 9.75

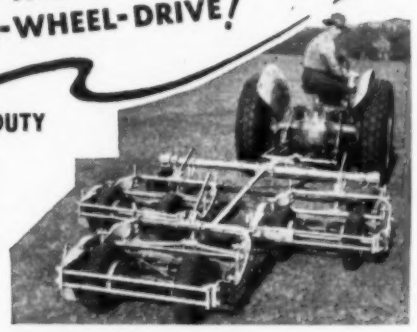
Poppet type. Pressure balanced. Off at neutral position. Piston type with built-in relief valves for limit of cylinder strokes. ⅝" AN tube size (7/8"-14 thread) inlet & outlet. Ports to cylinder are 1/2" AN tube size 3/4"-16 thread.

PALLEY SUPPLY CO. DEPT. NED-3 6321 SAN FERNANDO RD. GLENDALE 1, CALIF.

Order from this ad. All sales final. All prices F.O.B., Glendale. Pay by M.O. or check. P.O.'s accepted from D.&B. firms. ½ deposit with C.O.D.'s.

For more details circle NED-2740 on enclosed inquiry slip

ROSEMAN-MOWERS LEAD THE FIELD WITH NEW REAR-WHEEL-DRIVE!



ROSEMAN HEAVY-DUTY REAR-WHEEL SPECIAL PURPOSE MOWERS—

the finest mowing equipment you can buy!

ROSEMAN Heavy-duty Mowers with Hi-cut hitch are your answer to restricted budgets and increased maintenance costs. The Roseman Heavy-duty Mower will mow turf areas 3 to 5 times faster than conventional methods. Eliminate use of sickle for mowing . . . keep parkways and other areas neat . . . perfectly trimmed.

ROSEMAN Mowers with nonbreakable malleable side frames give top performance with true low-cost trouble-free service. Rubber tire design permits travel across curbs or parkways without damage to equipment. Exclusive rear drive design, without protruding side wheel, permits overhang of curbs, planted shrubbery areas without drop off . . . permits mowing closer to signs, trees, guardrails and obstructions than any other. Roseman Mowers are designed to mow a given area faster, more efficiently and at less cost. Nationwide sales and service.

WIRE, Write or Phone for descriptive literature, prices and availability

ROSEMAN MOWER CORPORATION

Phone UNiversity 4-1842 EVANSTON, ILLINOIS

For more details circle NED-2741 on enclosed inquiry slip

How to install machinery

Faster! Easier! At lower cost!

ISOMODE® PADS permit you to install most machines without bolting, floor damage or costly, heavy bases. Placed under legs of equipment, they absorb impact-shocks and as much as 70% of the vibration. They thereby keep machines in place even without cementing — reduce noise — cut down both building and machine maintenance.

ISOMODE PADS, engineered from Du Pont "Neoprene," last for years. They permit you to locate or relocate machines anywhere, and on all types of flooring. Thousands of effective, money-saving installations have already been made — from bench equipment to high capacity punch presses. Why not try an installation to see the remarkable results first hand? Bulletin 415 gives more data — write today.

THE MB MANUFACTURING COMPANY, Inc.

1066 State Street, New Haven 11, Conn.

For more details circle NED-2742 on enclosed inquiry slip

New Literature & Catalogs

Tool Steel Data

"Tool Steel Handbook" is a 197-page text for use by engineers, metallurgists and others interested in tool, die and allied steels. Charts and tables give specific and comparative data on properties, analyses and applications. All important grades of tool steels are described. Other chapters deal with forms and finishes, heat treating and handling techniques. Complete set of weight tables and other useful reference material are included. Free copies will be sent to qualified persons on request to Allegheny Ludlum Steel Corp., 2020 Oliver Bldg., Pittsburgh 22, Pa.

For more details circle **NED-2743** on enclosed inquiry slip

Bearing Maintenance

Anti-Friction Bearing Distributors Association—"AFBDA Bearing Maintenance Report" is a monthly publication dealing solely with the many and varied problems of maintenance of antifriction bearings. Booklet will be sent regularly to those interested. File folder containing the issues that have been published during the past year is available.

For more details circle **NED-2744** on enclosed inquiry slip

Predictable Performance "Floats"

Fischer & Porter Co.—Predictable metering floats for "area" flow-rate meters are described in 8-page illustrated folder 10529. It describes and gives specifications for Flowrator instruments with true percentage flow scales and factor tags that are stocked for immediate shipment.

For more details circle **NED-2745** on enclosed inquiry slip

Cooling Coils

Trane Co.—Up-to-the-minute developments in extended surface cooling coils for use with direct expansion refrigerants and chilled water in air conditioning or process applications are covered in 72-page illustrated bulletin DS-365. Over 50 pages are devoted to performance data tables, selection instruction, specifications and design information.

For more details circle **NED-2746** on enclosed inquiry slip

Stainless Steel Coating

Steelcote Mfg. Co.—A stainless steel coating for protection of all metal surfaces against the ravages of corrosion is described in 4-page illustrated bulletin "A New Steelcote Product." Made with fine flake stainless steel particles carried in a plastic type vehicle, coating resists wide variety of corrosive elements, oils, greases and heat up to 400° F.

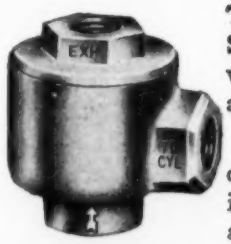
For more details circle **NED-2747** on enclosed inquiry slip

Thermal Controls

Fenwal Inc.—52-page illustrated catalog 400 describes the design, operating characteristics and installation of each of the 10 variations on the basic Fenwal thermostatic device. Containing drawings, photographs, graphs and tables, catalog has section which discusses selection and application of thermal controls and their operating differential, sensitivity, lag and overshoot, frequency of switching and installation in solids, liquids and gases.

For more details circle **NED-2748** on enclosed inquiry slip

Quick exhaust valve steps up air cylinder operation



Quick Exhaust Valve Schrader #3044A

The completely automatic Schrader quick exhaust valve provides instant passage of exhaust air to the atmosphere.

Designed for mounting at cylinder ports, it speeds up piston action in either direction by dumping the air to the atmosphere, thus eliminating the usual slow-up caused by air traveling a distance to find its way to exhaust.

Complete catalog gives full information on the quick exhaust valve as well as hundreds of other products that will help you get the most out of air power in your plant. Send for it today.

A. SCHRADER'S SON

Division of Scovill Manufacturing Company, Inc.

459 Vanderbilt Ave., Dept. E-37, Brooklyn 17, N. Y.

For more details circle NED-2749 on enclosed inquiry slip

SPRAYING SYSTEMS CO. ENGINEERS AND MANUFACTURERS

3211 Randolph Street Bellwood, Illinois

WRITE FOR General Catalog No. 22 . . . or Pneumatic Atomizing Nozzle Catalog No. 23

For more details circle NED-2750 on enclosed inquiry slip

PERECO Electric Furnaces

The PERECO Melting Furnace (Model PF-1414) offers highly flexible and accurate temperature control.

For Melting Non-Ferrous Metals

Extra benefits are realized in an electric furnace design that permits a cleaner, quieter, more consistent operation. The PERECO furnace does this 24 hours a day . . . every day! Designed for non-ferrous metal melting, the PF-1414 uses a pot 14 inches in diameter, 14 inches deep. Water capacity is 24 pounds, red brass working capacity 190 pounds, aluminum capacity 54 pounds. Operating range 700° F. to 2400° F. Power requirements: 23kw, 220 volts, 60 cycles, three phase. Over-all dimensions: 36" wide, 36" deep x 36" high. For additional information on operation and installation . . . write us today.

PERENY EQUIPMENT COLUMBUS OHIO

PERENY EQUIPMENT CO.

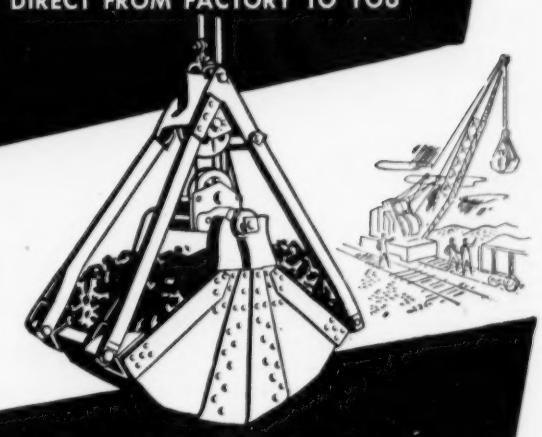
Dept. G, 893 Chambers Rd., Columbus 12, O.

PERECO also makes standard and special furnaces for most temperatures from 450° F. to 5000° F.

For more details circle NED-2751 on enclosed inquiry slip

BROWNHOIST BUILDS BETTER BUCKETS — for less money

DIRECT FROM FACTORY TO YOU



ROPE-REEVE, POWER WHEEL AND LINK TYPE

Write for illustrated catalogue

INDUSTRIAL BROWNHOIST CORPORATION

BAY CITY, MICHIGAN

146

For more details circle NED-2752 on enclosed inquiry slip

Now a new name
to start our second half century . . .

CHICAGO METAL HOSE CORPORATION

Flexonics Corporation

To better reflect the expanding activity of the company, the name of the Chicago Metal Hose Corporation has been changed to FLEXONICS CORPORATION coincident with our 50th anniversary.

FLEXONICS CORPORATION
Formerly Chicago Metal Hose Corporation
1343 S. Third Avenue, Maywood, Illinois
Manufacturers of flexible metal hose and conduit, expansion joints, metallic bellows and assemblies of these components.
In Canada: Flexonics Corporation of Canada, Ltd., Brampton, Ontario

For more details circle NED-2758 on enclosed inquiry slip

this new CATALOG

will help you solve your DUST AND FUME PROBLEMS

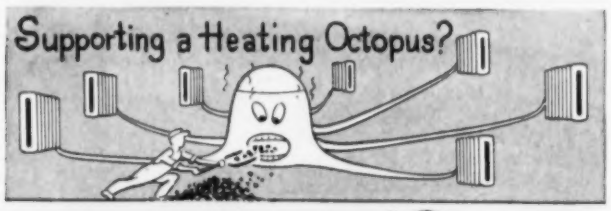
- Contains 40 pages of practical information and engineering data on dust and fume control.
- Explains how Dustube Collectors combine the proven efficiency of cloth filtration with a unique operating simplicity and economy.

WRITE TODAY FOR YOUR FREE COPY OF CATALOG 72-B

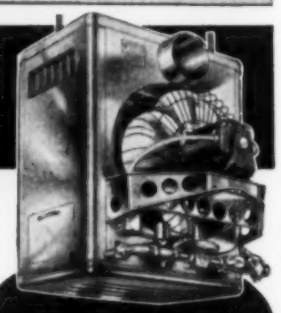
American dustube® COLLECTORS
WHEELABRATOR & EQUIPMENT CORP.
508 S. Byrkit St., Mishawaka 8, Ind.

For more details circle NED-2759 on enclosed inquiry slip

Supporting a Heating Octopus?



Each REZNOR GAS UNIT HEATER IS A COMPLETE HEATING MACHINE



- ★ NO LOSS from heat transmission
- ★ MAKES HEAT where you want warmth
- ★ SPOT-LOCATE as many REZNORS as you need (no interconnection)
- ★ ADD to the system as you want (no leaders to run)

REZNOR
WORLD'S LARGEST-SELLING GAS UNIT HEATER

REZNOR IS MODERN . . .
—As many diesel locomotives add or subtract power units as power is needed, Reznor units can be put into or withdrawn from service as heat is needed. REZNOR is efficient. REZNORS install quickly. Before you install any heating—primary or auxiliary, check REZNOR.

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14 UNION ST. · MERCER, PENNA.
Send me 20-page catalog in full color

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Firm_____
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City_____ Zone_____ State_____

For more details circle NED-2760 on enclosed inquiry slip

New Literature & Catalogs

Hydraulic Metalworking Presses

American Steel Foundries, Elmes Engineering Div.—Illustrated and described in 12-page bulletin No. 1010-B are hydraulic metalworking presses. Electric control provides semiautomatic or automatic operation and inching, with speed change and slide reversal governed either by ram travel or pressure.

For more details circle NED-2761 on enclosed inquiry slip

Electrodes & Welding Alloys

Eutectic Welding Alloys Corp.—Profusely illustrated "1952 Eutectic Directory" offers 16 pages of data and technical information on series of low temperature welding alloys for use on cast iron, steel, alloy steels, copper, brass, bronze, aluminum, magnesium, hard overlays and for all cutting metals. Properties on over 100 alloys are charted.

For more details circle NED-2762 on enclosed inquiry slip

Flexible Shaft Handbook

Third edition of S. S. White Flexible Shaft Handbook is 256-page reference manual which provides comprehensive picture of range and scope of flexible shafts in transmitting power and remote control. Sections cover construction and functions of power drive and remote control shafts; selection for specific application; flexible casings used with shafts (including line of plastic covered casings); data on types of angle adapters and fittings; and an appendix of engineering tables and data. Requests for copies must be made on company letterhead to S. S. White Industrial Div., 10 E. 40th St., New York 16, N. Y.

For more details circle NED-2763 on enclosed inquiry slip

Abrasive Cutting

American Chain & Cable Co., Campbell Machine Div.—36-page booklet DH-301 entitled "Principles of Abrasive Cutting" describes abrasive cutting, methods, applications, materials cut and cutting capacities relative to Campbell line of machines.

For more details circle NED-2764 on enclosed inquiry slip

Fine Seamless Tubing

Uniform Tubes—Line of fine seamless tubing available in sizes from 0.010 to ⅝-in. OD and in any analysis metal is discussed along with plant facilities, specifications and applications in 4-page illustrated folder. Pointer tubing finer than human hair is covered in its use as instrument indicating needles.

For more details circle NED-2765 on enclosed inquiry slip

Capacitors & Interference Filters

Astron Corp.—Under each major listing of "Capacitors and Filters for Electronic Applications" in 24-page illustrated catalog of same name will be found history of that type component, its use and specifications. Included are metallized paper capacitors, AQ capacitors for operation up to 125° C without derating, RF interference filters with attenuator data and oil filled molded paper tubulars.

For more details circle NED-2766 on enclosed inquiry slip

Liquid Filling Machines

Packer Machinery Corp.—12-page illustrated catalog P-30 describes straightline semiautomatic liquid filling equipment of gravity and vacuum types for practically any size or type of container.

For more details circle NED-2767 on enclosed inquiry slip

Mecco SAFETY ROUND SHANK TYPE HOLDER

With the knurled shank designed to permit a firm, positive grip, the Model RS Type Holder is made of Mecco Safety Steel to eliminate mushrooming and spalling. The type is interchangeable, and the holder can be made for either one or two lines of type. Includes patented snap slide for quick changing of type.
Write for literature.

M.E. CUNNINGHAM CO.
SAFETY STEEL STAMPS
151 East Carson Street · Pittsburgh 19, Pa.

For more details circle NED-2768 on enclosed inquiry slip

KORFUND Type LK

for EFFICIENT VIBRATION CONTROL

Vibration transmitted *from* punch presses, shears, compressors and other machines is destructive and costly. Vibration transmitted *into* precision machines causes rejects, cuts production.

Both can be prevented—completely and economically.

Korfund Type LK Steel-Spring Vibro-Isolators provide complete Vibration Control. Rugged construction means longer life for long-run economy. Built-in levelling screw eliminates shimming. Adjustable built-in resilient chocks act as stabilizers. Load range, 50# to 17,000# with deflections up to 1¼" depending on size.

Write for your free copy of Bulletin LK-552. The complete line of Korfund Vibration Control products is described in Bulletin G-104, with a selector chart which gives recommendations for both normal and critical conditions. See Sweet's Catalog Files, or write us for your free copy today. Representatives in principal cities.

THE KORFUND COMPANY, INC.
KORFUND VIBRATION CONTROL — SPRINGS · RUBBER · CORK
48-35P Thirty Second Place • Long Island City 1, N. Y.
In Canada: 2040 Victoria St., Montreal 2

For more details circle NED-2769 on enclosed inquiry slip

WE MAKE ALL TYPES OF PLUG VALVES
. . . including the right one for your needs

We are the only manufacturer who makes *all* of the various types of plug valves used in industry . . . LUBRICATED . . . NON-LUBRICATED . . . FULL PORT . . . VENTURI. We have no "leaders." *We make them all;* therefore, we have no reason to "push" one type valve over another. Our only concern is to see that you get the *right* valve for *your* requirement.

To help you keep this in mind the next time you need plug valves, we'd like to send you our catalog. Why not write for it today.

HOMESTEAD VALVE MANUFACTURING COMPANY
"Serving Since 1892"
P. O. BOX 84 CORAOPOLIS, PA.

For more details circle NED-2770 on enclosed inquiry slip

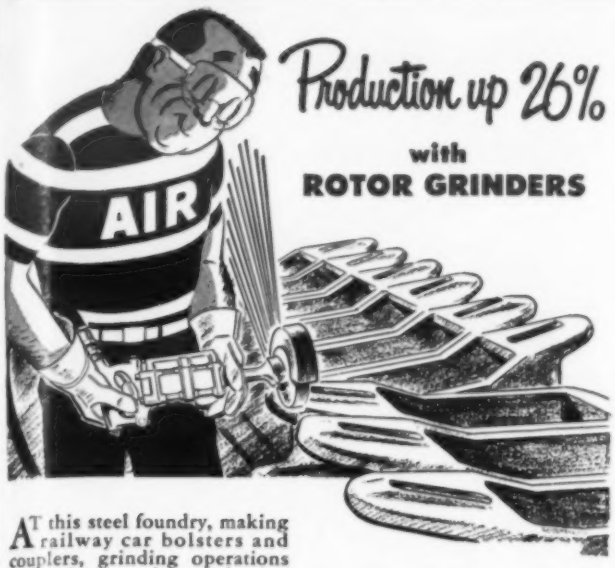
GO "AMERICAN" FOR CIRCULAR WELDED PRODUCTS

You Save when you specify "American Welded" Rings, Bands and Assemblies because they are less costly than circular products fabricated by other methods

SEND FOR YOUR COPY OF OUR 20 PAGE ILLUSTRATED CATALOG

THE AMERICAN WELDING & MANUFACTURING CO.
WARREN, OHIO

For more details circle NED-2771 on enclosed inquiry slip



Production up 26% with ROTOR GRINDERS

AT this steel foundry, making railway car bolsters and couplers, grinding operations were slowing the production schedule.

PROBLEM: Need for more finished pieces per day. Reduction of high wheel cost. Reduction in "down time" of equipment for repairs. Formerly used 8", 13-pound grinders.

SOLUTION: Rotor Application Engineer recommended 6", 6,000-rpm Rotor Grinders. Weigh only 9¾ lbs.

RESULTS: Production stepped up 26%. Less operator fatigue. Wheels last longer. Finishes are better.

The Rotor Application Engineer can help *you* too. Call or write for Catalog #38.

AIR O'TOOL

THE ROTOR TOOL CO.
CLEVELAND, OHIO

For more details circle NED-2772 on enclosed inquiry slip

HARD FIBRE **Carrying & Shipping CASES**

FOR INSTRUMENTS • ELECTRICAL & ELECTRONIC DEVICES • ARMY-NAVY EQUIPMENT • SAMPLES • PORTABLE PRODUCTS • TOOLS, etc.

Rugged Case for "held-in-position" instrument, with plain and felt compartmented tray.

BAL has specialized in durable, hard vulcanized fibre products of every kind, for more than 50 years. Reinforced edges, riveted, double-thick to resist wear. Cases designed to fit the product, balance the load, and give full protection.

Mfrs. Fibre cases, trucks, kits and mill boxes.

"SINCE 1898"

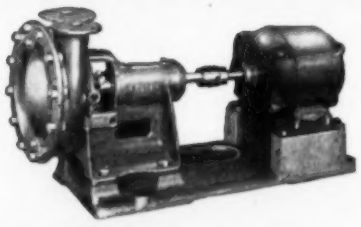
"BAL" BUILT WITH A CONSCIENCE

WILLIAM BAL CORPORATION
11 Johnson Street, Newark 5, N. J.

For more details circle NED-2773 on enclosed inquiry slip

Cut Costs in Handling Corrosives...

with **GOULDS**



Stainless Steel Centrifugal Pumps

Here's how an alert plant engineer cut pumping costs by 75%: When the pumps he was using to handle a highly corrosive liquid wore out, he replaced them with Goulds Stainless Steel Centrifugals, *costing only one-fourth as much.* The Goulds pumps have already lasted *twice as long* . . . and they're still going strong.

Rugged Construction Means Long Wear

The entire fluid end of the pump is made of stainless steel and mounted on a cast iron support. With the stuffing box on the suction side, pressure on it is limited to the suction head only. Interchangeable parts assure reduced inventories. These pumps are available with capacities to 600 G.P.M. Heads to 120 ft. For complete information, write for Bulletin 725.3.

Goulds PUMPS INC. Seneca Falls New York

For more details circle NED-2774 on enclosed inquiry slip

New Literature & Catalogs

Oil Tank Suction Heaters

Hauck Mfg. Co.—Advantages of both oil tank suction heaters for heating heavy grades of fuel oil to pumping temperatures, and preheaters which raise oil from pumping temperature to higher temperature required at burners for good atomization, combustion and control are presented in 6-page catalog 714.

For more details circle NED-2775 on enclosed inquiry slip

Copper & Copper Alloy Rods

American Brass Co.—This 24-page illustrated publication B-14 on copper and copper alloy rods for screw machine use includes physical constants and properties on 46 free cutting and general purpose rods. Weight tables and conversion factors plus ready-reference chart for balancing material costs against production costs are also featured.

For more details circle NED-2776 on enclosed inquiry slip

Tube Fittings

Parker Appliance Co.—76-page catalog is compilation of complete data on tube fittings and tube-to-pipe adapters, fabricating equipment and pertinent engineering selection and installation information. Photos, drawing and dimension tables are included for all shapes of Triple-lok standard three-piece flared fittings in brass, aluminum, steel and stainless; Ferulok flareless steel fittings; precision machined pipe fittings; and tubing, tube clips, tube cutters, benders and flaring tools.

For more details circle NED-2777 on enclosed inquiry slip

Propeller Fan Wheels

Baltimore Fan Co.—Made for direct or belt drive, type LS and IC propeller fan wheels are made with eight and four blades, respectively. Illustrated bulletins 4-F and 5-F give model number, diameter, horsepower, speed and volume data for various models in both series. Sizes range from 24 to 72 in.

For more details circle NED-2778 on enclosed inquiry slip

Electrical Wire & Cable

United States Rubber Co.—Performance and specification data on insulation and jacket compounds, portable cords and cables with ratings up to 5000 v are included in 52-page engineering catalog on electrical wires and cables. Information on other types of mining cables and mine equipment can be found, along with much general engineering data.

For more details circle NED-2779 on enclosed inquiry slip

Stitched Canvas Belting

C. R. Daniels, Inc.—New treatments and techniques for prolonging life and strength of stitched canvas conveyor and elevator belting are covered in this catalog. Details for ordering, installing and maintaining eight specific types of belt, including types for handling hot materials, are included.

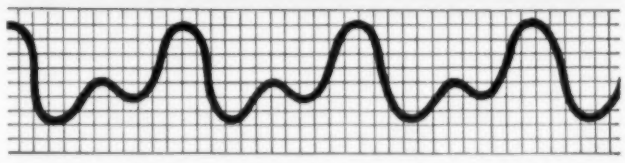
For more details circle NED-2780 on enclosed inquiry slip

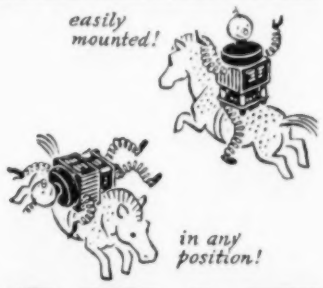
Fire Fighting Equipment

Rockwood Sprinkler Co.—Various types of fire extinguishing nozzles, foam liquids, wetting agent, rotating pipes and accessories are described and illustrated in 12-page illustrated catalog CP-7.

For more details circle NED-2781 on enclosed inquiry slip

timing.... *unaffected by voltage fluctuations*





AN **AGASTAT** TIME DELAY RELAY for every requirement

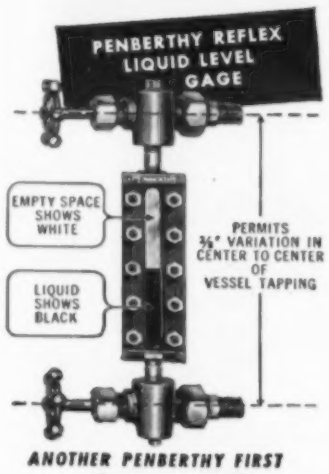
A'G'A 1027 NEWARK AVE., ELIZABETH 3 NEW JERSEY

A'G'A AGASTAT TIME DELAY RELAY · A'G'A STIMSONITE REFLECTORS · A'G'A AIRPORT LIGHTING · A'G'A MARINE LIGHTING EQUIPMENT

For more details circle NED-2782 on enclosed inquiry slip

PENBERTHY "Floating Shank"

Saves Time and Money in Gage installation



ANOTHER PENBERTHY FIRST

A feature available only on Penberthy drop forged steel (and alloy) gage valves, the "floating shank" automatically compensates for as much as 3/8" variation in the center-to-center distance of the vessel tapping. This saves time and cuts the cost of gage installation . . . eliminates stresses often induced during mounting. Penberthy "floating shank" is available at slight additional cost. It will pay you well to specify "floating shank" on your next gage order.

PENBERTHY INJECTOR COMPANY
DIVISION OF THE BUFFALO-ECLIPSE CORPORATION
Established 1886 DETROIT 2, MICHIGAN Canadian Plant, Windsor, Ont.

For more details circle NED-2783 on enclosed inquiry slip

EXCEL No. 6 PAYS BOTH WAYS

TOOL & CUTTER GRINDING HEADQUARTERS in the smaller shop—

EXTRA SHARPENING SERVICE in the larger plant—

An outstanding value in price and performance! The Excel No. 6 Universal Cutter and Tool Grinder will accurately sharpen reamers and milling cutters in a wide variety of shapes and sizes. A full line of attachments is available for a multitude of applications including cylindrical and internal grinding. Base optional.

Swings work ..... 8" dia. x 16" long
Face mill capacity ..... 12" dia.
Table surface ..... 4" x 24"

PROMPT DELIVERY FOR DEFENSE

Builders of Precision Grinders for 78 Years

COVEL PRECISION GRINDERS
BENTON HARBOR — MICHIGAN

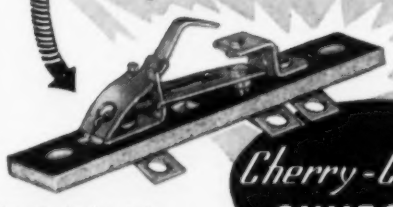
DRILL GRINDERS · CUTTER & TOOL GRINDERS · HYDRAULIC & HAND FEED SURFACE GRINDERS

Write for BULLETIN NE-32

For more details circle NED-2784 on enclosed inquiry slip

Coil-Spring CONSTRUCTION

for EASIER ADAPTABILITY!



2000 STANDARD (Actual Size)

Cherry-Channer SWITCHES

Underwriters' Laboratories Inspected 6A 125V. A.C. 3A 250V. A.C.

In A.C. circuits of a wide variety of products Cherry-Channer Switches have hundreds of applications. Their time-proven *over-center, coil-spring construction* permits a wide range of actuating pressures by specifying a spring of desired characteristics for each job. Precision-built. Individually tested. For details write Dept. 3-NED.

- Economical
- Dependable
- Positive in Snap Action
- May be Cam-Actuated

Cherry-Channer Corporation
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HIGHLAND PARK, ILLINOIS

For more details circle NED-2785 on enclosed inquiry slip

The New CLEARVIEW
NAMEPLATE PRESS
EASY TO OPERATE • COMPACT • DURABLE

Here at last is a new low-priced Nameplate Press that will pay for itself quickly and many times over.

Now you can stamp neat, perfectly aligned letters and figures on all types of identification plates with this new, easy-to-operate Nameplate Press:

MACHINERY DETAIL PLATES
KEYS — TAGS — CHECKS
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and scores of other identification purposes.

PREVENTS IRREGULAR ALIGNMENT, SPACING, DEPTH

- Stamps Neat Uniform Characters
- Fully Automatic Letter Spacing
- High Quality Hardened Steel Dial
- Adjustable Depth Control
- Accommodates Plates up to 2½" x 4"
- Nickel Plated Throughout
- Uses No Electricity

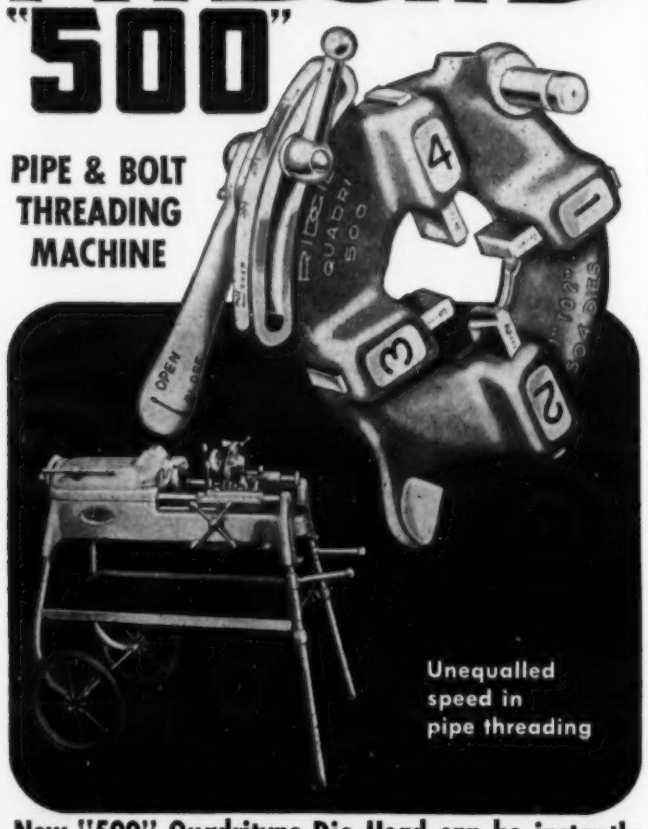
FULLY GUARANTEED

Write, call or wire today for complete information and price.

The CLEARVIEW Company
177 Stanton St., New York 2, N. Y. GR. 3-3830

For more details circle NED-2786 on enclosed inquiry slip

Exclusive New Quick-Opening
Quadritype Die Heads
ON THE NEW
RIDGID
"500"
PIPE & BOLT THREADING MACHINE



New "500" Quadritype Die Head can be instantly adjusted from 1" to 2" regardless of position of quick-opening lever—and without removing dies or die head from machine.

★ Also improved Dualtype Die Heads, one for ¼" and ⅜", one for ½" and ¾", same instant size change *right in the machine.*

★ Also separate Monotype Die Heads available, ⅛" to 2", bolt die heads, ¼" to 2".

★ All tools in the "500" thread, cut, ream independently, and right up to chuck, swing out of way when not in use.

★ With a score of other sensational new features! See the new RIDGID "500" at your Supply House.

THE RIDGE TOOL COMPANY • ELYRIA, OHIO

RIDGID
Work-Saver Pipe Tools

For more details circle NED-2787 on enclosed inquiry slip

New Literature & Catalogs

Precision Cylindrical Grinders

Landis Tool Co.—Thirty-one photographs and sketches are used in 16-page catalog B-51 to illustrate jobs suitable for 6-in. CH and 10-in. LCH plain cylindrical grinders. Specifications, outline dimensions and equipment information are included, as are descriptions of various features.

For more details circle NED-2788 on enclosed inquiry slip

Industrial Freezers

Webber Appliance Co., Industrial Div.—Shrink fitting, hardening, stabilization and testing are applications for industrial mechanical freezers described in 4-page illustrated data sheet. Round-the-clock temperatures as low as −165° F can be produced. Over 45 standard models are listed in six temperature ranges.

For more details circle NED-2789 on enclosed inquiry slip

Electro-Analysis Apparatus

Eberbach Corp.—20-page manual outlines methods for analysis of copper and lead by electro-analysis. Methods and bibliography are product of Battelle Memorial Institute research.

For more details circle NED-2790 on enclosed inquiry slip

Industrial Scales

Toledo Scale Co.—128-page illustrated catalog describes principal types of scales used for industrial weight control purposes. Seventeen sections are indexed according to scale type. Specifications are given on bench, portable, floor and counting scales, and force measuring, balancing and testing devices.

For more details circle NED-2791 on enclosed inquiry slip

Mechanical & Electric Flow Meters

Bristol Co.—40-page illustrated bulletin F1605 describes Series 500 line of mechanical and electric flow meters made in range of models suited for variety of uses. Instruments for controlling and telemetering flow of steam, water, air, gas, oil and other fluids are described.

For more details circle NED-2792 on enclosed inquiry slip

Cyclone Dust Collectors

Quinn Brothers Inc.—Design No. 6 cyclone dust collectors, described and illustrated in 4-page data sheet, are made in capacities from 1400 to 18,000 cfm in single units, and in multiple units for larger volumes. It can recover particles as fine as 40 microns (0.0016-in.) Features, dimensions and capacities are given for each size in series.

For more details circle NED-2793 on enclosed inquiry slip

Instruments & Tooling

Daco Machine & Tool Co.—First issue of "Daco Doings" shows unique tooling and production equipment, including complex Swiss pantograph and battery of jig borers and jig grinders. Photographs of development and research laboratory are included.

For more details circle NED-2794 on enclosed inquiry slip

Flexible Shaft Machines

Foredom Electric Co.—Line of flexible shaft machines and five interchangeable handpiece types are covered and their specifications given in 8-page illustrated catalog No. 180. Units can be suspended from shoulder strap or hung on hook.

For more details circle NED-2795 on enclosed inquiry slip

Dust Collectors

Torit Mfg. Co.—Both cabinet and cyclone type dust collectors, in sizes ranging from ⅓ to 5 hp, are described and illustrated in 24-page catalog No. 36. Line of fittings and accessories and blueprint sketches with overall dimensions are included.

For more details circle NED-2796 on enclosed inquiry slip

Industrial Coating Terms

Sherwin-Williams Co.—Over 200 definitions of terms commonly used in industrial products finishing are contained in 16-page booklet, "Glossary of Industrial Coating Terms." Requests for copies should be written on company letterhead.

For more details circle NED-2797 on enclosed inquiry slip

Aircraft Rivet Guide

Milford Rivet & Machine Co. — Compiled as ready reference for design engineers, production and purchasing officials in aviation, "Handy Guide for Specifying Aircraft Rivets" combines in one spread design charts to indicate rivet styles and tables of sizes, weights and quantities.

For more details circle NED-2798 on enclosed inquiry slip

Designing of Springs

Peck Spring Co.—Information pertinent to design and development of springs plus summary of company's capacities and facilities are contained in 4-page folder "Ways to Cut Costs with Simplified Design." Data set forth is backed by over 30 years' experience in the fabrication of spring products.

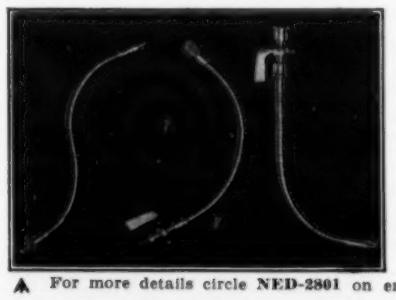
For more details circle NED-2799 on enclosed inquiry slip

For WAR or for PEACE
A good source for Cast Brass Parts and Assemblies
Central facilities include——
BRASS FOUNDRY—TOOL & PATTERN SHOP—TURRET LATHES — AUTOMATIC CHUCKERS — DRILL PRESSES and MILLING—POLISHING—PLATING—ASSEMBLING
THE CENTRAL BRASS MFG. CO.
2950 E. 55th St. Cleveland, Ohio

For more details circle NED-2800 on enclosed inquiry slip

"Bullseye" COOLANT SPOUTS
stay put without any support . . .

Adjustable to any position with just the touch of the hand, "Bullseye" Coolant Spouts remain in position regardless of machine vibration, or volume of coolant flow. Not only is easily adjustable, also leakproof. FAUVER "Bullseye" Coolant Spouts are supplied with fittings in combinations most suitable for your requirements — in standard lengths — bulk tubing and fittings available. Send for a catalog page.



J. N. Fauver Co., Inc.
49 W. Hancock
Detroit 1

For more details circle NED-2801 on enclosed inquiry slip

GENUINE — SIMPLE
SILVER PLATING
"ON THE JOB" WITH POWDER

Purposes of silver plating need not be explained to you of the electrical field.

The biggest problems of silver plating are its convenience, economy and thoroughness. "Cool-Amp" silver plating POWDER is the answer to these problems.

"Cool-Amp" deposits a genuine coat of silver that will not peel off and provides cool maximum conductivity for copper, brass or bronze contacts. It has been proven equal to any electroplating for bolted and stationary contacts and is far more adaptable . . . always ready for use.

"Cool-Amp" POWDER offers a quick and easy solution to heating due to oxidation, improves the continuity of electrical service and reduces maintenance.

"Cool-Amp" is completely harmless to the user and is simple to apply. It can be used by any number of people at the same time. ON THE JOB, in underground vaults and sub stations and in hard-to-get-at places. The only equipment needed is a sharp steel wire brush or abrasive cloth, clean rag and water.

Dampen a rag, dip in "Cool-Amp" and rub on surface. One pound will silver plate approximately 6000 square inches.

$13.50 PER POUND SHIPPED PRE-PAID.

WRITE FOR FREE SAMPLE AND QUANTITY QUOTATIONS
GENUINE • SIMPLE SILVER PLATING
COOL-AMP
Dept. ED 8603 S. W. 17th Avenue • Portland 19, Oregon

For more details circle NED-2802 on enclosed inquiry slip

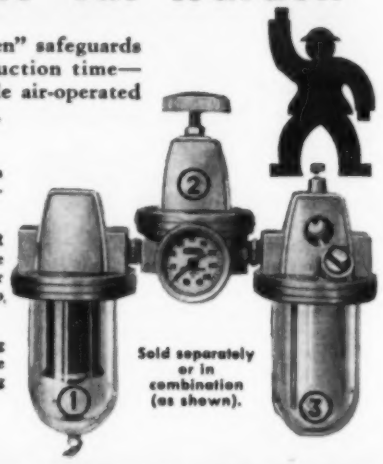
IT PAYS TO
INVEST IN PROTECTION

Send for Descriptive Literature

HANNIFIN "Air Warden"

Hannifin "Air Warden" safeguards against loss of production time—protects your valuable air-operated equipment three ways.

1. AIR FILTER—removes grit, dirt, scale, moisture, emulsified oil.
2. PRESSURE REGULATOR—keeps pressure where you want it. No danger of pressure build-up with "Air Warden."
3. LUBRICATOR—atomizing type lubricator, can be filled without shutting off air pressure.



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HANNIFIN

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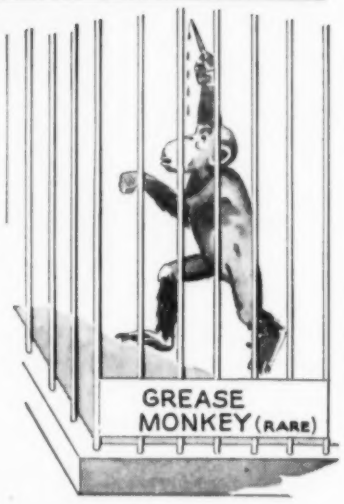
For more details circle NED-2803 on enclosed inquiry slip

Not many of them left since Transall took over



Transall Belt Conveyor Idlers

Pre-Lubricated

No Lubrication Labor
No Lubricant Cost

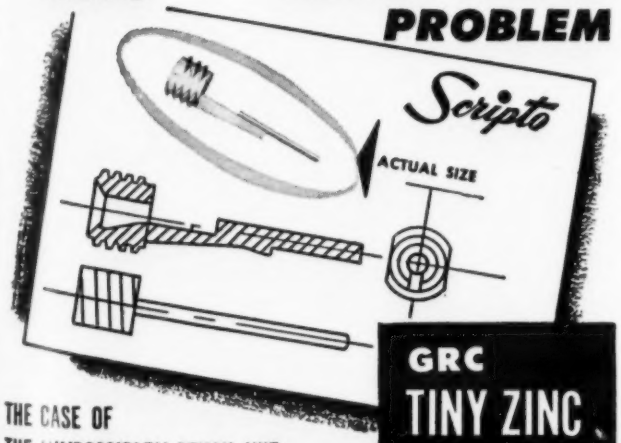
TRANSALL INC.

Manufacturers of a complete line of Belt Conveyor Equipment

119 North 11th St. Birmingham 4, Ala.

For more details circle NED-2804 on enclosed inquiry slip

GRC SOLVES ANOTHER SMALL PARTS PROBLEM



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THE CASE OF THE "IMPOSSIBLE" PENCIL NUT

Scripto's new design seemed impossible until GRC showed how it was practical as a small precision die casting. Greater designing flexibility resulted in a product achieving far-reaching sales advantages. Gries' exclusive facilities produce simple or intricate tiny parts in one automatic operation . . . completely trimmed, ready for use . . . 100,000 parts to millions.

SMALLNESS UNLIMITED

Max. Wt. ½ oz.
Max. Lgth. 1¾ in.

Send us your specifications and get the complete story. WRITE, WIRE, PHONE TODAY!

GRIES REPRODUCER CORP.

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For more details circle NED-2805 on enclosed inquiry slip

New Literature & Catalogs

Pressure Controller

Minneapolis-Honeywell Regulator Co., Brown Instruments Div.—Nonindicating pressure controller, known as Honeywell Pressure Pilot, is described and illustrated in 8-page bulletin 16-1. Principle of operation, specifications, design features and mounting dimensions are detailed.

For more details circle NED-2806 on enclosed inquiry slip

Power Booster-Stacker Conveyor

Industrial Engineering & Mfg. Co.—Loading, unloading, stacking, boosting and horizontal conveying are some of the functions performed by 600-U series Universal power booster-stacker. This conveyor is available in 12, 14 and 16-in. trough widths, operates at belt speed of 54 fpm, is adjustable from 33-degree incline to horizontal and is offered in 12, 14 and 16-ft channel lengths. Complete data are included in 4-page illustrated bulletin.

For more details circle NED-2807 on enclosed inquiry slip

Signal Equipment

Cannon Electric Co.—32-page illustrated catalog HSE-1 covers line of signal equipment, including visual annunciators, code relays, fire alarm stations, grounding intercouplers, in-and-out registers, isolations transformers, lamp sockets, program bell transfer panels, corridor lights, silent paging systems and sectional cable terminals.

For more details circle NED-2808 on enclosed inquiry slip

Protective Coatings

David E. Long Corp.—8-page illustrated bulletin and 2-page price list contain full information on DEL protective coatings for wood, masonry and metal against deterioration from acid, alkalies, water, oil, solvents, weather, heat and abrasion. Types are available for specific conditions of corrosion. Details are given on properties and application procedures.

For more details circle NED-2809 on enclosed inquiry slip

Cotter Pins

Hobbs Mfg. Co.—Form No. 750 gives prices and dimensions of steel, brass, stainless steel and Monel Hoblok hammer-lock type and Loxit extended prong cotter pins. Diameters range from 1/16 to ⅜-in. and lengths from ½ to 6 in.

For more details circle NED-2810 on enclosed inquiry slip

Aluminum Connectors

Burndy Engineering Co.—Use of aluminum in electrical connectors for distribution, transmission, substations, generating stations and other applications is covered in detail in compilation of illustrated catalog sections. Selection and application information, design considerations and specifications for wide variety of connector types are found in comprehensive issue "Aluminum for Distribution."

For more details circle NED-2811 on enclosed inquiry slip

Commercial & Industrial Pallets

National Pallet Corp.—Job-engineered and standard type pallets are shown in 16-page illustrated bulletin "National Pallets" which gives suggested uses, load limits and other data. Importance of selecting pallets from single source of supply that can service operations economically from coast-to-coast is stressed.

For more details circle NED-2812 on enclosed inquiry slip

Bin Stuck Lately?
Use this space to make a rough sketch or send details of the troublesome *bin* or hopper

Name _____ Title _____
Address _____
City _____ State _____

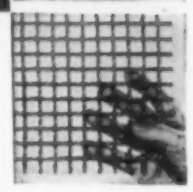
Move, Settle or Package Quickly with *Cleveland* Air Vibrators

THE CLEVELAND VIBRATOR CO.

2745 Clinton Avenue • Cleveland 13, Ohio

For more details circle NED-2813 on enclosed inquiry slip

You can count on CAMBRIDGE for all types of INDUSTRIAL WIRE CLOTH



Fine or Coarse Mesh—More than 600 different mesh sizes are available from 20 x 250 mesh up to 4" openings. Many popular items are kept in stock and can be shipped to you immediately.

Any Metal or Alloy—Any metal or alloy that can be drawn into wire can be woven by our skilled craftsmen, including precious metals and unusual materials such as lead wire.

Varied Weaves—Cambridge industrial wire cloth is regularly produced in nine basic weaves. Single intermediate crimp through twilled dutch filter cloth, each of which has certain advantages for specific uses.

Accuracy—You know the mesh count is right when you specify Cambridge. Every inch of cloth produced in our plant is carefully controlled by individual loom operators during weaving; each finished piece is again inspected before shipping.

And, for Expert Advice—on any problem of filtration, screening, sizing or other wire cloth uses, you can count on your Cambridge field engineer to provide the answer. Call on him freely. For information, write direct or look under "Wire Cloth" in your classified telephone directory.

FREE wire cloth reference manual. Gives complete range of sizes and weaves available from Cambridge, specifications, metallurgical data and fabrication facilities. WRITE TODAY.

The Cambridge Wire Cloth Co.

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

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Cambridge 3, Md.

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

For more details circle NED-2814 on enclosed inquiry slip

Why Most Pipe Fitters Buy RIGID Pipe Wrenches

Guaranteed RIGID wrench housing saves you repair trouble and expense

★ It's an extra fast easy wrench to work with, too—handy pipe scale on hookjaw, adjusting nut spins easily to pipe size, comfort-grip handle.
★ Special alloy jaws both replaceable—won't slip or lock on pipe.
★ Safe powerful malleable housing and I-beam handle.
★ Save money, make work easier—buy RIGID, world's most popular pipe wrench, at your Supply House.

THE RIDGE TOOL COMPANY • ELYRIA, OHIO

RIGID Work-Saver Pipe Tools

For more details circle NED-2815 on enclosed inquiry slip

Relays BY GUARDIAN GUIDE THE WAY!

Aircraft landing lights, radar and communications systems usually employ Guardian Relays for split-second response, unfailing operation and a minimum of maintenance. On the ground, Guardian Relays guide motor car and rail traffic with a speed and accuracy far beyond the limitations of human eyes and hands. Guardian Relays are available with either open type or HERMETICALLY SEALED construction to withstand dust, gun blast heat, fog, fungi, salt air, stratosphere cold, even concussion and bursting shells. From simple circuits to the complexities of Time Delay—Timing—Counting—Multiple Credit—Add and Subtract or Sequence operations—Guardian can solve your control problem . . . FAST!

Series 345 D.C. Relay

GUARDIAN ELECTRIC
1626-C W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

For more details circle NED-2817 on enclosed inquiry slip

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The WHAT-WHY-WHERE-WHEN and HOW OF LAMINATED PLASTICS!

IF YOUR BUSINESS uses structural materials, decorative materials, or electrical insulating materials—you should know the fundamental facts about laminated plastics made with BAKELITE Phenolic laminating varnishes.

To supply these facts, Bakelite Company offers you this 36-page illustrated booklet telling what these materials are, how they are made, and how they can be used to improve the performance, beauty, economy, and sales value of your products.

Case histories of the various types and grades of laminated plastics available for many fields of application are included in the guide book, along with test data on their physical, chemical, and electrical properties, and the methods employed in their fabrication and finishing.

A list of representative manufacturers using BAKELITE Phenolic Resins for the production of outstanding laminated plastics for countless end uses is included. Fill out and mail the coupon for your free copy of this indispensable reference and data book today!

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A Division of Union Carbide and Carbon Corporation
30 East 42nd Street, New York 17, N. Y.
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Company _____
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TRADE MARK
BAKELITE COMPANY
A Division of
Union Carbide and Carbon Corporation
30 East 42nd Street, New York 17, N. Y.
In Canada:
Bakelite Company (Canada) Ltd., Belleville, Ont.

For more details circle NED-2818 on enclosed inquiry slip

New Literature & Catalogs

Saturable Transformers

Magnetic Amplifiers, Inc.—Details of a standard line of saturable transformers are given in illustrated bulletin. Both 60 and 400-cycle units are offered with phase reversible power output levels from 1 to 1000 watts. Units conform to military specifications.

For more details circle NED-2819 on enclosed inquiry slip

Laboratory Clamps

Laboratory Industries, Inc.—12-page illustrated catalog "Laboratory Clamps" explains advantages of high strength, corrosion resistance, good gripping action, high melting point and versatility of Alumaloy pressure-formed clamps for testing, research and development laboratories. Specifications are given for single and double burette holders; combination, universal, duplex and extension clamps; adjustable and swivel clamp holders; set-up frames and components; and laboratory specialties.

For more details circle NED-2820 on enclosed inquiry slip

Oscillating Conveyors

Link-Belt Co.—24-page illustrated book No. 2444 describes Positive Action oscillating conveyors for conveying, feeding, cooling and screening a variety of loose bulk materials. Methods of handling such products as shakeout sand, food products, cement clinker, hot castings, silicon carbide, ores, chemicals and coal are detailed. Trough widths range from 8 to 48 inches, and handling capacities range from a few pounds to several hundred tons per hour.

For more details circle NED-2821 on enclosed inquiry slip

Block & Gage Accessories

DoALL Co.—"Gage Blocks and Accessories for Modern Measurement Control" is title of 24-page illustrated catalog 51-201 which discusses use of gage blocks and light wave interference bands for precision measurement. Gages and blocks are described.

For more details circle NED-2822 on enclosed inquiry slip

Packings

Johns-Manville—Guidance for the selection of proper packings and gaskets is provided by 6-page illustrated folder "Packings for the Power Plant". Various packings are described, and flow sheet is used to show application of each.

For more details circle NED-2823 on enclosed inquiry slip

Grinding Mills

Allis-Chalmers Mfg. Co.—Comprehensive engineering data on grinding mills for rock products, cement, chemical and mining operations are contained in 44-page illustrated bulletin 07B6718A. Design, operation, capacities and application data are included.

For more details circle NED-2824 on enclosed inquiry slip

Flexible Shafting

F. W. Stewart Mfg. Corp.—Over 400 illustrations are contained in 64-page book on flexible shafting. Advantages and applications in variety of industries are described, and many types of end fittings, casings, adapters and shaft combinations that apply to variety of standard sizes and types of shafts are shown.

For more details circle NED-2825 on enclosed inquiry slip

CHALLENGE US!

Security Locknuts installed on a large Tornadyne clutch for one of the large mechanical presses made by the Clearing Machine Corp. of Chicago. Before using Security Locknuts the fasteners had to be wired in place.

CHALLENGE us to solve that fastener problem! We are doing it for others and can do it for you.

We would like to have you see the results of tests that have proved the Security Locknut practically vibration proof. A Security Locknut holds and stays "put" even in the face of vibration that destroys the bolt. Security Locknuts can be adjusted and re-adjusted, removed and reused over and over again without materially losing their locking power and without damage to the bolt.

If you have a vibration or fastener problem accept our challenge. Ask for a sample Security Locknut. No obligation, of course.

SECURITY LOCKNUT CORPORATION
North Ave. and 15th Ave., Melrose Park, Ill.

SPECIAL OFFER — State the details of your fastener problem on your company letterhead and we will send you without obligation a sample Security Locknut for testing along with a Security Thread Chart.

This picture shows a cross-section of a Security Locknut. The insert, indicated removed, is of high quality, heat treated, alloy spring steel and becomes a permanent part of the nut.

The insert is elliptical in shape and this design causes the retainer to grip the bolt with the terrific tension that only spring steel of great strength could exert and prevent the nut from turning. Simple — dependable—positive!

Security
The Nut You Can't Shake Loose

For more details circle NED-2826 on enclosed inquiry slip

Take advantage of exclusive P&H AC Dial-lectric principle

give your production a lift

—with safe, open-circuit voltage . . . easy, quick start arc . . . time-saving, built-in remote control . . . compact AC design

Your men like the P&H AC Dial-lectric — like its safety under the most adverse conditions; like the easy, quick-start arc, the elimination of arc-blow. And they get more done! Get sounder, better looking welds in less time, thanks to built-in remote control which lets them select the right heat at the work, turns *walking time* into *welding time.* Write for details.

2350-A

P&H WELDING DIVISION
4537 W. National Ave.
Milwaukee 14, Wis.
HARNISCHFEGER CORPORATION

For more details circle NED-2827 on enclosed inquiry slip

let's take a look at your roof

POST-WINTER ROOF INSPECTION IMPORTANT NOW!

TROUBLE and dollars were saved the George A. Krug Baking Co., Westchester, N. Y., when Tremco Man Stretton suggested a February roof inspection to H. Hank, Plant Engineer.

They found much evidence of winter damage. Valleys between roof monitors and parapet had suffered from ice. A large depressed area held water inches deep causing roofing sheeting to rot out. Many coping joints were defective.

A condition which could have led to serious damage to roof and building interior, and ultimately required extensive repairs was caught in time and quickly remedied.

Depressed areas were levelled with a fill mix. Coping joints were raked out and pointed. Monitors were treated with a rust inhibitor.

The work, by a local contractor, was done under the instruction of the trained Tremco Man.

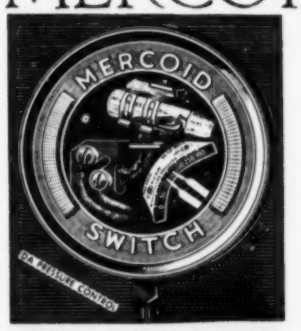
It's a wise precaution to find out now what this last winter has done to your roof. Call in a Tremco Man. There is no obligation for his expert inspection and advice. Write The Tremco Manufacturing Company, Cleveland, Ohio and The Tremco Manufacturing Co., (Canada) Ltd., Toronto.

UM 1015

THE TREMCO MANUFACTURING CO.
CLEVELAND, OHIO
Products and Methods for Building Maintenance

For more details circle NED-2828 on enclosed inquiry slip

MERCOID - GIVES YOU THAT ADDED PROTECTION



Like the proverbial expression, "A Chain Is No Stronger Than Its Weakest Link," likewise, "A Control Is No Better Than Its Electrical Contacting Mechanism."

Where open contacts are used, they are exposed to dust, dirt and corrosion, and arc in the open, causing pitting and sticking of the contacting surfaces.

The Mercury Switch used exclusively in all Mercoid Controls is protected from the above handicaps, and operates indefinitely without any deterioration, thereby assuring that added safety and better performance.

If you have a control problem—involving the automatic control of pressure, temperature, liquid level, mechanical operations, etc.; it will pay you to consult Mercoid's engineering staff—always at your service.

WRITE FOR CATALOG 700-A, PLEASE
MENTION THIS PUBLICATION

THE MERCOID CORPORATION • 4201 BELMONT AVE. • CHICAGO 41, ILL.

For more details circle NED-2829 on enclosed inquiry slip

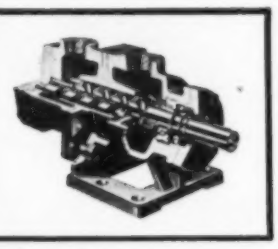
See DE LAVAL for

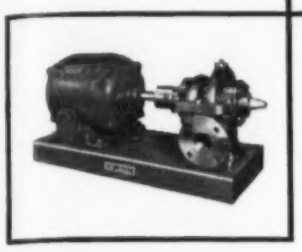
Worm Gear Speed Reducers

Made in horizontal and vertical, single and double reduction units for ratios to 8000:1 for transmitting up to 250 hp.

IMO Pumps

The A313A IMO—for general oil handling—capacities to 80 gpm—pressures to 150 psi. The A313B—for variety of oil handling services—capacities to 80 gpm—pressures to 275 psi (constant).





General Service Pump

In the GS pump, mechanical seals eliminate stuffing boxes—permanently lubricated ball bearings eliminate lubrication. Capacities to 400 gpm, heads to 230 feet.

DE LAVAL DE LAVAL STEAM TURBINE CO. TRENTON 2, N. J.

DL 131

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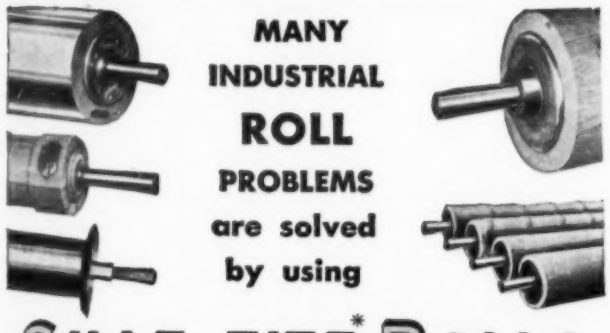

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Minimum sizes 3" diameter and 3' face length

Many patented constructions provide strongest possible shaft setting. Your choice of many different types and materials—wood, rubber, iron, brass, stainless steel, plastic, etc. Whatever your roll problem, put it up to Rodney Hunt.

SEND FOR NEW CATALOG NO. 48

Most complete publication of its kind

Industrial Roll Division

RODNEY HUNT MACHINE CO.

73 Maple Street, Orange, Mass.

*Reg. U.S. Pat. Off.

▲ For more details circle NED-2831 on enclosed inquiry slip ▲

Buckingham *Thread* Restorer

Now — no more drilling or hack sawing to replace damaged male threads! Buckingham Thread Restorer eliminates flats and nicks — cleans heavily rusted and corroded threads on studs, bolts, pipes, threaded shafts.

Simple — quick. Just slip on a Buckingham Thread Restorer at bottom of damaged area and back-off. Jaws adjust to any pitch — SAE, ASME, pipe or tapered. One tool handles many sizes . . . no die sets needed!

Eight models for ¼" to 6" threads. Write for free folder and name of nearest dealer.

BUCKINGHAM MANUFACTURING CO., INC.
65-67 Travis Street Binghamton, N. Y.

▲ For more details circle NED-2832 on enclosed inquiry slip ▲

New Literature & Catalogs

Cellulose Gum

Hercules Powder Co., Cellulose Products Dept.—"Properties and Uses of CMC Cellulose Gum" is a 24-page illustrated manual on this product which increases the viscosity of water. It is soluble in hot or cold water, has physiological inertness, imparts suspending action on finely divided solids, provides sizing action on paper and textiles, and is resistant to greases, oils, and organic solvents.

▲ For more details circle NED-2833 on enclosed inquiry slip ▲

Speed-Reducing Pulley

Hart Reduction Pulley Co.—Details of the Hart Reduction Pulley which affords reductions from 7:1 up to 700:1 are given in 6-page illustrated folder No. 251. These pulleys reduce speed, change direction, clutch load, release when overloaded and are offered as two-speed units for high or low output speed or for forward and reverse service.

▲ For more details circle NED-2834 on enclosed inquiry slip ▲

Metalworking Facilities

Elkay Mfg. Co.—Machinery and equipment available for punching, drawing, stamping and forming all types of metal sheets from 26-gage to ¼-in. plate are described in 32-page illustrated booklet "Elkay Offers Complete Sheet Metal Facilities". Typical work now produced includes all types of sinks and institutional equipment. Engineering and production facilities are available for subcontract work.

▲ For more details circle NED-2835 on enclosed inquiry slip ▲

Vacuum-Pressure Impregnating

Process Industries Engineers, Inc.—Impregnating equipment for electrical equipment, castings, wood products, leather and textiles is subject of 4-page illustrated bulletin 51-B. Integrated vacuum-pressure impregnating and drying installations are shown.

▲ For more details circle NED-2836 on enclosed inquiry slip ▲

Heat Sealing Machines

Techtmann Industries, Pack-Rite Machines Div.—Information descriptive of the 38-in. Jumbo Jaw heat sealer, line of floor bases used with heat sealing machines and Plasti-Sealer for sealing plastic materials can be found in illustrated bulletins 104, 103 and 105, respectively.

▲ For more details circle NED-2837 on enclosed inquiry slip ▲

Conveyor & Elevator Belting

New York Belting & Packing Co.—All the necessary data to lay out a drive or specify a belt is contained in catalog on conveyor and elevator belting. Complete tables on carrying capacities, horsepower factors, pulley diameters, maximum and minimum plies for troughing and other information are included.

▲ For more details circle NED-2838 on enclosed inquiry slip ▲

Gas Boiling Point Data

Arthur D. Little, Inc.—Conversion chart listing boiling points of gases from carbon tetrachloride to helium in Centigrade, Fahrenheit and absolute scales is available printed on 10 x 16-in. wall calendar. Transfer of liquid helium from a Collins cryostat is illustrated.

▲ For more details circle NED-2839 on enclosed inquiry slip ▲

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PARTS FEEDERS

Will feed without damage parts of most shapes, sizes and materials to grinders and presses, inspection and packaging devices, and other automatic processing equipment. WRITE for catalog data, or send details of your problem along with sample parts for testing to . . .

SYNTRON CO.
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▲ For more details circle NED-2840 on enclosed inquiry slip ▲

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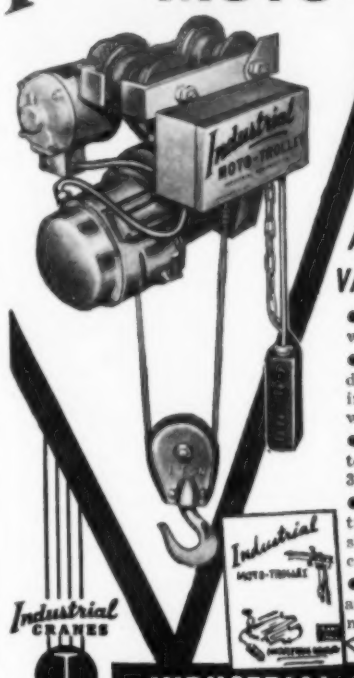

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ADJUSTABLE TO ACCOMMODATE WIDE VARIETY OF BEAM SIZES

- Crown-tread machine steel wheels with hardened drivers.
- Each wheel equipped with double-row precision ball bearings and removable-head axle with Alemite grease fittings.
- Powered by a crane-duty high-torque totally enclosed motor of 30 minute 55 degree rating.
- Magnetic contact panel has transformer to reduce voltage in single speed push button control circuit.
- 4-button control station operates single speed trolley and hoist motions.

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Representatives in Principal Cities.

▲ For more details circle NED-2841 on enclosed inquiry slip ▲

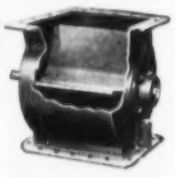
PERHAPS ONE OF THESE

will give you an idea. Of course, we can't show everything Jeffrey builds to help you to greater production at less cost . . . but here are four items you might have overlooked in thinking of Jeffrey and its broad line.

Any one of the four has its own specific application . . . is able to function satisfactorily in its own right. Car Pullers, Bin Valves, Barrel Packers or Feeders . . . we will be glad to tell you more about them . . . how they might help speed up your operations.

In the meantime, send for our New Catalog No. 830.

ROTARY BIN CHECK VALVE for a constant, uninterrupted flow of fine flooding material to vibrating Feeders or WAYTROLS. Also Bin Level Indicators.



LOW-HEAD BARREL PACKER for reducing size of containers, increasing capacity and cutting shipping costs. Also supplied with deck to provide conveying action in packing.

ROTARY-TYPE FEEDER for finely pulverized material. Also other types of feeders.

CAR PULLER for spotting from one to six cars—two sizes. There is a new bulletin on the Jeffrey Car Puller—send for it.

JEFFREY

ESTABLISHED 1877
THE JEFFREY MANUFACTURING CO.
952 Fourth St., Columbus 16, Ohio

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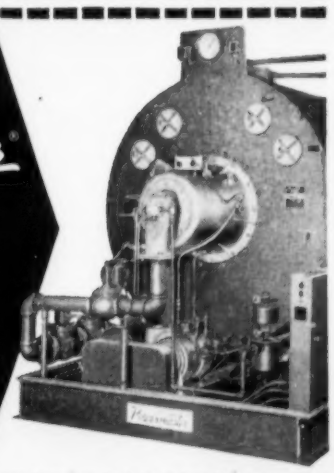

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WHERE THERE'S SMOKE THERE'S FURY

Clouds of toxic smoke caused by organic-base welding compounds will make any weldor blow his top. Weldor and weld efficiency suffer under these circumstances. Clear the air in your shop—switch to Protect-O-Metal No. 2 P.O.M. No. 2, an inorganic compound, will not cause fumes or smoke! P.O.M. quiets the arc—improves fluxing—yields better, cleaner welds. Because spatter cannot penetrate P.O.M., weld cleaning becomes a "wipe-off" operation—you can save 85% of weld cleaning time and labor at a cost of 1/10c per lineal foot. Try P.O.M. No. 2 at no risk. Order a trial gallon ($3.25) today. We'll cancel the invoice if P.O.M. is not satisfactory.

PROTECT-O-METAL

POM

G.W.SMITH

G. W. SMITH & SONS, INC., 5406 Kemp Road, Dayton, O.

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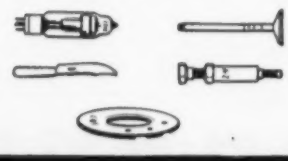
HALF/SECOND IS MARKING TIME

Watch marking production rise with the use of Matthews "Airgrit" Marking Machine, as each half-second of time means another marked part. "Airgrit" gently 'breathes' its mark on smooth surfaced metal, plastic, glass or fibre parts . . . permanently and legibly. Write today for complete information . . . MATTHEWS "AIRGRIT".



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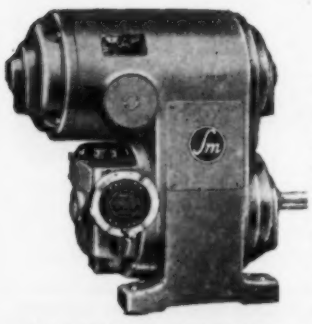

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Equipment adaptation to: Sequence synchronization—operators' abilities—load variations due to differences in quantity, quality, weight, size, tension, hardness or shape of material to be processed, machined, conveyed, blended, mixed, etc.

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With Speed-Trol you get the maximum in production, plant efficiency, quality and profit.

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Index to Advertisers

A

Abrasive Products, Inc. 7
Acadia Synthetic Prod. Div. Western Felt Works 2, 3
Acme Industries, Inc. 97
Acromark Co., The 18
Adams, R. P., Co., Inc. 5
Aerco Corp. 2
Aeroquip Corp. 26
Aerovent Fan Co., Inc. 55
Aetna Plywood & Veneer Co. 51
Aget-Detroit Co. 17
Air Reduction Co., Inc. 9
Airborne Accessories Corp. .. 13
Ajax Engineering Corp. 97
Ajax Flexible Coupling Co. .. 81
Ajusto Equipment Co. 57
Alan Wood Steel Co. 33
Albion Industries, Inc. 69
Allen-Bradley Co. 26
Allied Products Corp. 31
Allied Radio Corp. 59
Allis-Chalmers 23, 45, 54, 79
Alter, Harry, Co., The 62
Alvey Conveyor Mfg. Co. 18
American Air Filter Co. 29
American Blower Corp. 4
American Chain & Cable Co., Inc. 8, 18, 20
American Electric Motors ... 2
American Felt Co. 62
American Gas Accumulator Co. 89
American Kleer-Vu Plastics, Inc. 61
American Monorail Co., The.. 79
American Optical Co. 45
American Photocopy Equipment Co. 12
American Prod. Co., The 2
American Pulley Co. 25, 80
American Pullmax Co., Inc... 52
American Ventilating Hose Co. 82
Amer. Welding & Mfg. Co... 88
American Wheelabrator & Equip. Corp. 21, 88
Ames, B. C., Co. 58
Andrews-Alderfer Co. 52
Anti-Corrosive Metal Products Co., Inc. 82
Apco Mossberg Co. 55
Arcos Corp. 44
Armstrong-Blum Mfg. Co.... 64
Art Wire & Stamping Co. ... 79
Ashworth Bros., Inc. 66
Atkomatic Valve Co., Inc. .. 70
Atlas Industrial Corp. 48
Atlas Press Co. 76
Aurand Mfg. & Equip. Co.... 11
Automatic Transportation Co. 52
Automatic Valve Co. 48
Automotive & Aircraft Div., Amer. Chain & Cable 18

B

Bakelite Co., Div. of Union Carbide & Carbon Corp. ... 92
Baker Ind. Truck Div. of The Baker-Raulang Co. 47
Bal, William, Corp. 89
Ballymore Co. 53
Baltimore Fan Co. 8
Barber-Colman Co. 20
Barco Mfg. Co. 71
Barnes Drill Co. 7
Barnstead Still & Sterilizer Co. 72
Bassick Co., The 37
Baughman Mfg. Co., Inc. .. 44
Bay State Abrasive Prod. Co. 77
Belgian Electric Sales Corp... 33
Bellows Co., The 78
Benchmaster Mfg. Co. 65
Bendix Aviation Corp. 33, 71
Bertram, Harvey P., Co. ... 50
Biddle, James G., Co. 85
Binks Mfg. Co. 85
Black & Decker Mfg. Co....13, 98
Black Diamond Saw & Machine Works, Inc. 29
Black Drill Co., Inc. 81
Blackmer Pump Co. 65
Blaw-Knox Div. of Blaw-Knox Co. 16B
Bliss, E. W., Co. 6
Blum, Julius, & Co., Inc. ... 81
Boiler Engineering and Supply Co. 81
Bond Foundry & Machine Co. 46
Borg-Warner, Rockford Clutch Div. 56
Bostitch, Inc. 73
Boston Woven Hose & Rubber Co. 41
Bowser, Inc. 50
Boyer-Campbell Co., The.... 5
Brady, W. H., Co. 25, 46, 63
Breeze Corp., Inc. 66
Breuer Electric Mfg. Co. ... 43
Brooks Chemicals, Inc. 10
Brown, W. R., Corp. 19
Brown Engineering Co. 22
Browning Mfg. Co. 2
Brummeler Steel Prod. Corp.. 43
Bruning, Charles, Co. 29
Brunner Mfg. Co. 5
Buckingham Mfg. Co., Inc. .. 93
Buell Engineering Co. 66
Buffalo Forge Co. 44
Burgess-Manning Co. 58
Burndy Engrng. Co., Inc.... 47
Buschman, E. W., Co., Inc... 8

C

Cabot, Samuel, Inc. 74
Calculagraph Co. 60
Cam Tool Co., Inc. 55
Cambridge Wire Cloth Co. .. 91
Camcar Screw & Mfg. Corp.. 14
Campbell Box & Tag Co. 64
Carborundum Co., The 33
Carpenter Steel Co., The..... 43
Carroll Pressed Metal Co. ... 75
Central Brass Mfg. Co., The. 90
Century Electric Co. 69
Chain Belt Co. 75
Champion Lamp Works 30
Champion Pneumatic Machinery Co. 70
Chart-Pak, Inc. 82
Cherry-Channer Corp. 89
Chicago Hardware Foundry Co. 21
Chicago Printed String Co. .. 34
Chicago Rivet & Machine Co. 60
Chicago Show Printing Co.... 17
Chicago Wheel & Mfg. Co. .. 19
Cincinnati Electrical Tool Co. 13
Clark Bros. Bolt Co. 16B
Clark Door Co. 78
Clarke Sanding Machine Co.. 47
Clearview Co., The 90
Cleve. Crane & Engrng. Co..35, 62
Cleveland Vibrator Co., The.. 91
Climax Molybdenum Co. 6
Clipper Belt Lacer Co. 67
Coated Coil Corp., The 86
Coffing Hoist Co. 77
Columbia-Geneva Steel Div... 20
Columbus McKinnon Chain Corp. 11
Commander Mfg. Co. 16B
Commercial Shearing & Stamping Co. 32
Congress Drives 79
Conoflow Corp. 81
Continental-Diamond Fibre Co. 83
Convoy, Inc. 24
Cool-Amp 90
Coppus Engineering Corp. .. 6
Covel Mfg. Co. 89
Cover, H. S. 8
Crown Industrial Products Co. 3
Crozier Machine Tool Co. ... 52
Cullen-Friestedt Co. 59
Cummins-Chicago Corp. 9
Cunningham, M. E., Co. 88
Cushman & Denison Mfg. Co. 69
Cushman Motor Works, Inc.. 47
Cutler-Hammer, Inc. 46

D

Danly Machine Specialties, Inc. 45
Dart Union Co. 39
Daven Co., The 40
Davis Regulator Co. 95
Dayton Safety Ladder Co. .. 97
DeLaval Steam Turbine Co... 93
Deming Co., The 20
Denison Engineering Co. 35
Despatch Oven Co. 71
Detecto Scales, Inc. 50
Detroit Power Screwdriver Co. 57
DeWalt, Inc. 28
Di Machine Corp. 2
Dico Co. 30
Dillon, W. C., & Co., Inc.... 39
Dings Magnetic Separator Co. 27, 84
Disston, Henry, & Sons, Inc.. 44
Dixon Research Inc. 74
DoAll Co., The 20, 83
Dodge Mfg. Corp. 56
Doepke, Chas. Wm., Mfg. Co. 66
Dollin Corp. 71
Dollinger Corp. 58
Dravo Corp. 41
Dresser Mfg. Div. Dresser Industries, Inc. 54
Driv-Lok Pin Co. 22
Duff-Norton Mfg. Co., The .. 3
Dunham, C. A., Co. 77
Duo-Safety Ladder Corp. ... 41
Durant Mfg. Co. 34

E

Eagle Signal Corp. 34
Eastman Kodak Co. 37, 63
Edgemont Machine Co., The . 15
Elastic Stop Nut Corp. of America 20
Electric Controller & Mfg. Co. 57
Electroline Co. 38
Electro-Therm Inc. 40
Emerson Electric Mfg. Co. .. 40
Enterprise Machine Parts Corp., The 43
Erico Products, Inc. 12
Essex Wire Corp. 27, 62
Everede Tool Co. 17
Ex-Cell-O Corp. 19
Executone, Inc. 7

F

Fafnir Bearing Co., The 21
Farquhar, A. B., Co. 32
Farrelloy Co. 98
Faultless Caster Corp. 53
Fauver, J. N., Co., Inc. 90
Fawick Airflex Co., Inc. 73
Federal Products Corp. 35
Felt Products Mfg. Co. 23
Fenwal, Inc. 30
Fisher Governor Co. 48
Fisher Scientific Co. 10
Flash Box Opener Co., Inc. . 79
Flash-Stone, Inc. 15
Flexible Steel Lacing Co. 32
Flexonics Corp. 88
Flexrock Co. 29, 98
Flightex Fabrics, Inc. 53
Food Machinery & Chemical Corp. 60
Foote Bros. Gear & Machine Corp. 66
Fort Worth Steel & Machinery Co. 53
Fostoria Pressed Steel Corp. . 67
Foxboro Co., The 5
Frantz, S. G., Co., Inc. 96
French & Hecht Div. Kelsey-Hayes Wheel Co. ... 37
Friez Instrument Div. Bendix Aviation Corp. 33
Fulflo Specialties Co., Inc. .. 86
Fuller Brush Co., The 60

G

Gardner Machine Co. 10
Gast Mfg. Corp. 26
General Box Co. 35
General Electric Co. 96
General Fittings Co. 53
General Plate, Div. Metals & Controls Corp. 98
General Radio Co. 16A
General Scientific Equipment Co. 9
General Tire & Rubber Co. . 53
Gerotor May Corp. 24
Gits Bros. Mfg. Co. 56
Globe Co., The 80
Globe Hoist Co. 59
Goggle Parts Co., The 59
Goodrich, B. F. Co., The ... 45
Gorretta, Andrew, & Co. 12
Gorton, George, Machine Co. 24
Goulds Pumps, Inc. 89
Gravely Motor Plow & Cultivator Co. 76
Gries Reproducer Corp. 91
Grinnell Co., Inc. 73
Grip Nut Co. 82
Guardian Electric 92

H

Hamilton Tool Co., The 27
Hanchett Magna-Lock Corp. . 68
Hanna Engineering Works ... 13
Hannifin Corp. 29, 46, 91
Hansen, A. L., Mfg. Co. 31
Hapman Conveyors, Inc. Div. Hapman-Dutton Co. .. 68
Harnischfeger Corp. 92
Harper, H. M., Co., The .. 96
Harris-Barrier, Inc. 84
Hartzell Propeller Fan Co. .. 28
Haskins, R. G., Co. 16
Hassall, John, Inc. 64
Haynes Stellite Co., A Div. of Union Carbide & Carbon Corp. 51
Hays Corp., The 45
Hein-Werner Corp. 64
Hermaseal Co., Inc. 11
Hill Acme Co., The 61
Hoffman Co. 75
Holtzer-Cabot 11
Homer Mfg. Co., Inc., The .. 10
Homestead Valve Mfg. Co. .. 88
Honan-Crane Corp. 48, 49
Houghton, E. F., & Co. 80
Hunt, Rodney, Machine Co. .. 93
Huot Mfg. Co. 52
Hy-Pro Tool Co. 40
Hyster Co. 70

I

Ideal Industries, Inc. 3
Ideal Stencil Machine Co. ... 68
Illinois Testing Laboratories, Inc. 36, 65
Independent Pneumatic Tool Co. 97
Industrial Brownhoist Corp. . 87
Ind. Engrng. & Mfg. Co., Inc. 72
Industrial Equipment Co. ... 93
Industrial Gear Mfg. Co. ... 97
Industrial Gloves Co. 80
Industrial Marking Equip. Co. 41
Industrial Products Co. 62
Ind. Shredder & Cutter Co. . 86
Ingersoll-Rand 56
Ironbound Box & Lumber Co. 57
Irvington Varnish & Insulator Co. 55
Island Equipment Corp. 62

J

Jefferson Electric Co. 18
Jeffrey Mfg. Co., The 93
Jelliff, C. O., Mfg. Corp., The 21
Jo-Bell Products, Inc. 86
Johnson Bronze Co. 43
Johnson Mfg. Corp. 39
Johnson Plastic Corp. 78
Jones, C. Walker, Co. 82
Jones, Howard B., Div., Cinch Mfg. Corp. 29

K

Kalamazoo Tank & Silo Co., Machine Tool Div. 50
Kase Machine Co. 85
Kelsey-Hayes Wheel Co., French & Hecht Div. 37
Kennametal, Inc. 51
Kester Solder Co. 34, 71
Kett Tool Co., The 73
Kold-Hold Mfg. Co. 36
Koppers Co., Inc. 12
Korfund Co., Inc., The 88
Krieg, Charles W., Co. 85

L

LaMotte Chemical Products Co. 27
Lamson Corp. 15
Lamson & Sessions Co., The 84
Lanham Co., The 36
Lawlor, S. C., Co. 15
Leiman Bros., Inc. 67
Leslie Co. 82
Lift Trucks, Inc. 66
Lincoln Engineering Co. 42
Linde Air Products Co., A Div. of Union Carbide & Carbon Corp. 25, 55
Link-Belt Co. 31, 43
Lippmann Engineering Works 73
Littell, F. J., Machine Co. 73
Logan Co. 4
Louden Machinery Co., The .. 32
Lovejoy Flexible Coupling Co.. 16B
Lug-All Co., The 38
Lumenite Electronic Co. 37
Lyon-Raymond Corp. (See Raymond Corp.) 86

Mc

McCord Corp. 59
McGill Mfg. Co., Inc. 27

M

M B Mfg. Co., Inc., The ... 87
Maas & Waldstein Co. 19
Machine Products Corp. 49
Mall Tool Co. 5
Mason-Neilan Regulator Co. . 41
Master Mfg. Co. 82
Mathews Conveyer Co. 48, 49
Mathewson Machine Works .. 5
Matthews, Jas. H., & Co. ... 94
Maxwell Co., The 63
May-Fran Engineering, Inc. . 58
Mead Specialties Co. 56
Mechanical Air Controls, Inc. 74
Mercoid Corp., The 92
Merrill Bros. 16A
Metals & Controls Corp. ...32, 98
Metzgar Co. 60
Michigan Wire Cloth Co. 13
Mico Instrument Co. 96
Micromatic Hone Corp. 54
Mid-States Gummed Paper Co. 3
Milton Roy Co. 31
Mitts & Merrill 38
Monarch Rubber Co., The .. 77
Mortell, J. W., Co. 98
Motch & Merryweather Machinery Co. 85
Moto-Truc Co., The 38
Multi-Clean Products, Inc. ... 63
Mystik Adhesive Products ..26, 57

N

National Acme Co. 54
National Plastic Co. 8
National Tool Co. 61
National Vulcanized Fibre Co. 6
New England Carbide Tool Co., Inc. 58
New Hermes, Inc. 25
New Jersey Machine Corp. .. 28
N. Y. Belting & Packing Co. 81
Newage International, Inc. .. 51
Newark Wire Cloth Co. 50
Niagara Blower Co. 67
Nicholson, W. H., & Co. 25
Nicholson File Co. 22
Nobur Mfg. Co. 31
North Bros. Mfg. Co. 14
Norton Co. 41
Nugent, Wm. W., & Co., Inc. 96

O

Ohio Knife Co. 61
Ohmite Mfg. Co. 15
O'Neil-Irwin Mfg. Co. 78
Open Steel Flooring Institute, Inc. 16
Orr & Sembower, Inc. 93
Ortman-Miller Machine Co. .. 45
Oster Mfg. Co., The 14
Ozalid, Div. of General Aniline & Film Corp. 35

P

Pabco Products, Inc. 42
Paddock Tool Co. 16A
Page Steel & Wire Div. Amer. Chain & Cable Co., Inc. .. 20
Paisley Products, Inc. 36
Palley Supply Co. 87
Pangborn Corp. 23, 64, 65
Paragon Spring Co. 39
Parks-Cramer Co. 22
Patterson-Kelley Co., Inc. ... 67
Paul Machine Tool & Die Works 16
Peck, Cecil C., Co. 4
Peck & Harvey 16
Peerless Electric Co. 80
Peerless Pump Div., Food Machinery & Chemical Corp. 60
Pekay Machine & Engineering Co. 5
Penberthy Injector Co. 89
Penetone Co., The 7
Penn Metal Corp. of Penna. 37
Pereny Equipment Co. 87
Pike, E. W., & Co. 23
Pioneer Rubber Co., The ... 14
Pneu-Trol Devices, Inc. 65
Potdevin Machine Co. 75
Powers Regulator Co., The . 97
Prat-Daniel Corp. 16B
Prime-Mover Co., The 79
Production Instrument Co. . 49
Progressive Mfg. Co. 38
Proto Tools 69

R

Rapids-Standard Co., Inc. . 28
Rauland-Borg Corp. 63
Raymond Corp. 86
Raytheon Mfg. Co. 74
Reading Crane & Hoist Corp 51
Ready-Power Co., The 83
Reliance Electric & Engrng. Co. 39
Republic Rubber Div. Lee Rubber & Tire Corp. 74
Reuland Electric Co. 69
Revolvator Co. 40
Reznor Mfg. Co. 88
Ridge Tool Co., The 90, 91
Robbins & Myers, Inc., Hoist & Crane Div. 39
Roberts, Weldon, Rubber Co 15
Robotron Corp. 9
Rockford Clutch Div. Borg-Warner 56
Rock-Tred Corp. 95
Rockwell Mfg. Co. 42
Rockwood Sprinkler Co. ..28, 57
Rolock, Inc. 42
Roseman Mower Corp. 87
Roto-Finish Co. 40
Rotor Tool Co., The 89
Round, David, & Son 9
Rowe Methods, Inc. 3
Roylyn, Inc. 23
Russell & Stoll Co., Inc. 21
Ryerson, Joseph T., & Son, Inc. 4
Rynel Corp. 70

S

SKF Industries, Inc. 7
Sabin Machine Co., The 76
Sarco Co., Inc. 30
Schirmer-Dornbirer Pump Co. 33
Schrader's A., Son, Div. Scovill Mfg. Co., Inc. 16B, 87
Schramm, Inc. 17
Scintilla Magneto Div. Bendix Aviation Corp. 71
Screen Equipment Co., Inc. . 96
Security Locknut Corp. 92
Seneca Wire & Mfg. Co. 76
Service Machine Co. 22
Service Recorder Co., The .. 51
Sheehan, R. T., Co. 14
Sheldon Machine Co., Inc. .. 83
Shenango-Penn Mold Co. 34
Shepard Niles Crane & Hoist Corp. 72
Sherwin-Williams Co., The ... 28
Signode Steel Strapping Co. .. 73
Simplex Time Recorder Co. .. 95
Simplicity Engineering Co. ... 56
Skinner Electric Valve Div., The Skinner Chuck Co. ... 76
Sly, W. W., Mfg. Co., The .. 29
Smith, F. H., Mfg. Co. 12
Smith, G. W., & Sons, Inc. .. 94
Smooth-On Mfg. Co. 69
South Bend Lathe Works ... 17
South Chester Corp. 23
Speed Selector, Inc. 38
Speedway Mfg. Co. 44
Speer Carbon Co. 10
Spencer Thermostat Div. Metals & Controls Corp. 32
Spencer Turbine Co., The ... 21
Spo Inc. 30, 61
Sprague Electric Co. 31
Spray Engineering Co. 49
Spraying Systems Co. 87
Sprout-Waldron & Co., Inc. .. 6
Square D Company 16A, 58
Stackbin Corp. 47
Stackpole Carbon Co. 42
Standard Pressed Steel Co. 16A, 46, 70, 79
Star-Kimble Motor Div. of Miehle Printing Press & Mfg. Co. 24
Sta-Warm Electric Co. 54
Stearns Magnetic, Inc. 98
Stephens-Adamson Mfg. Co. 8, 9, 84
Sterling Electric Motors 94
Stonhard Co. 97
Struthers-Dunn, Inc. 61
Sturtevant, P. A., Co. 52
Sturtevant Mill Co. 46
Sullivan-Becker Co. 76
Superior Tube Co. 83
Surface Combustion Corp. ... 75
Swartwout Co., The 4
Swift Lubricator Co., Inc. .. 81
Synthane Corp. 16A
Syntron Co. 16A, 32, 84, 93

T

Tabor Mfg. Co., The 74
Tal Bender, Inc. 56
Taylor Fibre Co. 13
Tempil Corp. 27
Tennessee Coal & Iron Div. 20
Thomas & Betts Co., The .. 67
Thomas Truck & Caster Co. 33
Tinnerman Products, Inc. ... 48
Titeflex, Inc. 36
Toledo Scale Co. 36
Toledo Timer Co., The 34
Tomkins-Johnson Co., The .. 75
Torit Mfg. Co. 37
Transall, Inc. 91
Tremco Mfg. Co., The 92
Triplett Electrical Instrument Co. 73
Tri-Saw Corp. 68
Tropical Paint & Oil Co. .. 96
Trumbull Dept., General Electric Co. 96
Truscon Steel Co. 88
Tubing Appliance Co. 6
Tumb-L-Matic, Inc. 85
Tuthill Pump Co. 85
Twin Disc Clutch Co. 52

U

Udylite Corp., The 78
Union Carbide & Carbon Corp., Bakelite Co. 92
Union Carbide & Carbon Corp., Haynes Stellite Co. 51
Union Carbide & Carbon Corp., Linde Air Products Co. 25, 55
Union Metal Mfg. Co., The.48, 49
Union Special Machine Co. . 68
Union Tool Co., The 9

Advertisers Index—Continued

United Electric Controls Co. . 22
United Laboratories, Inc. 8
U. S. Electrical Motors, Inc. 44
U. S. Instrument Corp. 19
U. S. Machine Tool Co. 23
U. S. Safety Service Co. 16
U. S. Steel Export Co. 20
United States Steel Co. 20
U. S. Steel Subsidiaries 20
U. S. Steel Supply Div. 20
U. S. Stoneware Co. 14
Universal Engrng. Co. 71
Universal Metal Hose Co. .. 54

V

Valvair Corp. 2
V-Belt Engineering Co. 98
Veeder-Root, Inc. 16, 77
Vend-Rite Mfg. Co. 16B
Viking Pump Co. 69
Vogel-Peterson Co. 72

W

Wales-Strippit Corp. 59
Ward Leonard Electric Co. .. 17
Watchemoket Optical Co., Inc. 64
Waterloo Valve Spring Compressor Co. 12
Webb, Jervis B., Co. 7
Wedge-Wire Corp. 18
Weksler Thermometer Corp. .. 84
Weller Electric Corp. 10
Wellman Bronze & Aluminum Co. 11
West Bend Equipment Corp. . 24
Western Felt Works, Acadia Synthetic Prod. Div. 2, 3
Westinghouse Air Brake Co. . 55
Westinghouse Electric Corp. . 70
Weston Electrical Instrument Corp. 24
Whitney Chain Co. 28
Wiegand, Edwin L., Co. ...4, 63
Wiggins, E. B., Oil Tool Co.. 11
Willson Products, Inc. 18
Wing, L. J., Mfg. Co. 78
Wire Rope Sling Dept. Amer. Chain & Cable 8
Wittek Mfg. Co. 60
Wolverine Tool Co. 47
Wood's, T. B., Sons Co. ... 83
Wood Conversion Co. 49
Worthington Pump & Machinery Corp. 30, 77
Wrought Washer Mfg. Co. ... 65

Y

Yale & Towne Mfg. Co. 19
Yarnall-Waring Co. 35, 42

Z

Zallea Brothers 78

Index to Products

A

Abrasive Products 1, 7, 15, 19, 25, 33, 41, 77, 88
Acoustical Materials 50
Adhesives 36
Air Conditioning, Controlled Humidity 67, 74, 86
Alloys, Special Purpose 42, 89

B

Barriers, Parking 84
Bearings 7, 21, 43, 87
Belt Fasteners 32, 67
Belting 56, 79, 83, 89
Belts, Conveyor 66, 81, 93
Benders 16, 50
Binders, Load 16
Bins & Boxes, Parts ..47, 66, 89
Boards, Bulletin 70
Boxes, Shop 12, 24, 47
Brakes 78
Brazing Materials 85
Broaching Equipment 85
Brushes, Electric 10
Brushes, Floor 60
Buckets, Crane 87
Burners, Gas 75
Bushings, Drill 71

C

Capacitors 31, 88
Car Spotter 93
Casters 28, 33, 37, 46, 53, 69
Castings 11, 37, 90
Castings, Centrifugal 34
Chains 11, 75
Chairs 57
Chucks 49
Chucks, Collet 13
Chucks, Magnetic 68
Clamping Devices 6, 12, 16b, 47, 60
Clamps, Lifting 16a
Cleaners, Air 5, 91
Cleaners, Pipe 11
Cleaners, Vacuum 14, 21, 43
Cleaning Equipment, Blast... 64
Cleaning Machines, Parts ..26, 48
Cleaning Materials 84
Clutches 15, 56
Coating Machines 9, 75
Coatings, Protective 14, 79, 87, 91, 96, 97, 98
Coils 36, 87
Collars 79
Communications Equipment.. ..... 7, 19, 63
Compressors, Air 17
Condensation Preventive 98
Controls, Air & Hydraulic... .....2, 11, 13, 29, 48, 55, 65, 70, 74, 76, 78, 81, 87
Controls, Bin Level 9
Controls, Electric 14, 19, 21, 32, 35, 37, 38, 40, 41, 42, 46, 47, 54, 56, 58, 62, 63, 70, 79, 86, 89, 92, 96
Controls, Level 37
Controls, Remote 18
Controls, Temperature & Pressure 22, 30, 37, 41, 42, 48, 54, 65, 82, 86, 87, 91, 97, 98
Conveyor Accessories 5, 8, 12, 16b, 91
Conveyors 1, 4, 7, 8, 14, 18, 31, 32, 44, 48, 49, 58, 60, 66, 68, 73, 75, 84, 91, 92
Coolants 81
Counting Devices .. 16, 34, 49, 77
Couplings, Flexible ... 28, 43, 81
Cranes..17, 39, 43, 51, 55, 61, 79
Cylinders, Air & Hydraulic.. 16, 16b, 45, 46, 55, 58, 75, 87

D

Deburring Equipment ..31, 40, 85
Dehumidifiers 60
Die Accessories 10, 39, 67
Dies 22, 31, 59
Dispenser, Tape 68
Doors, Industrial 42, 78, 80
Drafting Equipment 4, 29
Drilling Machines 66, 76
Drills 58, 66, 81
Drives, Machine 4, 13, 26, 52, 66, 78, 80
Drives, Variable Speed 16b, 30, 34, 38, 39, 44, 93, 94, 98
Drying Equipment 46
Duplicating, Dieless 78
Dust Collectors 17, 23, 26, 37, 46, 64, 65, 66, 88, 90

E

Electric Plants 41
Electronic Equipment 39, 44, 51, 53, 59, 67, 86
Elevating Equipment 1, 16a, 24, 27, 29, 40, 59, 86
Engines, Diesel 52
Engines, Gasoline 47, 78
Engraving Machines .. 24, 25, 96
Envelopes, Transparent ... 8, 61

F

Fabrics 53
Fans & Blowers 3, 5, 6, 8, 12, 15, 28, 37, 40, 44, 50, 55, 71, 77, 78, 89
Fastening Devices 8, 14, 16b, 20, 22, 25, 38, 40, 46, 48, 52, 56, 64, 73, 82, 84, 90, 91, 92, 96
Feeders, Motorized Hopper .. 57
Feeders, Stock 20, 58, 60, 76
Feeders, Vibratory 56, 93
Felt Products 2, 62
Fences 20
Files 22
Filtering Equipment 5, 29, 36, 48, 49, 50, 58, 72, 88, 91, 96, 98
Finishes ... 19, 26, 75, 79, 85, 90
Finishing Equipment 85
Finishing Equipment, Blast.. ..... 21, 23, 40, 64
Finishing Equipment, Spray.. ..... 4, 19, 76, 85
Fire Extinguishing Equipment 28, 89
Flexible Shaft Machines 5, 16, 88, 90, 92
Floor Machines ... 23, 43, 47, 63
Floor Maintenance 15, 21, 70
Flooring Materials 7, 8, 15, 16, 16b, 20, 33, 41, 42, 63, 79, 80, 83, 86, 95, 97, 98
Fluorescent Materials 85
Foundry Equipment 71
Furnaces, Industrial 87, 97
Fuses 12, 96

G

Gages, Level 89
Gages, Precision .. 35, 50, 58, 92
Gearing 13, 70, 97
Generators, Steam 58, 81, 86, 93
Glass Products 81
Gloves, Industrial ..14, 49, 80, 82
Goggles 16, 18, 45, 57, 64
Grinders, Tool & Cutter... 29, 89
Griding Accessories 29, 97
Grinding Machines 10, 13, 30, 47, 61, 69, 90, 92

H

Heat Exchangers 67
Heat Treating Equipment ... 42
Heaters, Compound 54
Heaters, Electric 1, 4, 40, 63, 77
Heaters, Electronic 28
Heaters, Unit. 16b, 59, 73, 77, 88
Heaters, Water 2, 53, 89
Hoists 9, 38, 39, 51, 72, 77
Honing Equipment 54
Hose & Fittings 11, 23, 24, 26, 41, 66, 82, 84, 85
Hose, Flexible Metal .. 1, 54, 88

I

Impregnating Equipment 93
Indicators, Pressure & Temperature 27
Inspection Equipment . 1, 13, 23, 34, 46, 49, 55, 61, 63, 64, 96
Instruments, Electric 73, 86
Insulation, Electric 6, 13, 16a, 55, 83

J

Jacks 43, 64
Jigs & Fixtures 5, 32
Joints, Rotating 71, 73

K

Keyseater 38
Knives & Blades 61

L

Labels 17, 34, 46
Laboratory Equipment ..9, 44, 92
Ladders 41, 53, 97
Laminated Materials 98
Lighting Equipment 6, 9, 18, 24, 27, 30, 40, 63, 67, 76
Lockers & Shelving 37
Lubricants 80
Lubricating Equipment 42, 56, 90, 91, 96

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MARCH, 1952

Products Index—Continued

M

Machine Tools 3, 7, 12, 14, 17, 20, 23, 24, 53, 83, 90
Machine Tool Accessories 1, 3, 5, 7, 13, 17, 22, 37, 52, 58, 59, 63, 73, 76, 82, 90
Magnetic Equipment 7, 10, 27, 57, 70, 84, 98
Management 82
Markers, Floor 69
Marking Equipment 18, 31, 41, 42, 46, 69, 90, 94
Masks 57, 63
Materials Handling Equipment 7, 8, 16a, 25, 35, 36, 48, 49, 55, 57, 60, 62, 70, 74, 75, 91, 93
Materials Handling, Overhead 8, 32, 35, 79
Meters, Flow 42, 45, 87, 90
Meters, Tong Test 16b
Mixing Equipment 10, 72
Moybdenum Alloys 6
Motor Repair Equipment ... 3
Motors, Electric.24, 33, 69, 70, 80
Mower, Lawn 57, 87

N

Nozzles, Spray 49, 87

O

Office Equipment ..12, 42, 68, 82
Openers, Box 79
Ovens, Industrial 71

P

Packaging Equipment & Materials 3, 6, 34, 49, 61, 64, 67, 68, 78, 88, 89, 93, 96
Packings & Gaskets .. 23, 92, 98
Painting Equipment 2
Parts, Precision . 44, 49, 71, 91
Pipe & Fittings 3, 22, 39, 43, 69, 78, 86
Pipe Joint Compound 74
Pipe Tools & Machines ... 90, 91
Plastics 6, 16a, 27, 80, 83, 84, 92, 97
Plating Equipment 90
Plywood 51
Power Units, Electric 2
Power Units, Hydraulic .. 19, 35
Power Units, Industrial Truck 83
Presses 1, 2, 4, 6, 7, 10, 28, 30, 36, 56, 62, 65, 68, 88, 96, 97
Production Facilities 93
Pulleys & Sheaves 2, 6, 16b, 53, 77, 79, 98
Pumps 17, 20, 24, 31, 33, 35, 37, 53, 54, 60, 62, 65, 69, 74, 85, 86, 89, 93
Pumps, Air & Vacuum 26, 28, 67
Punches 31, 59, 72
Pyrometers 36

R

Racks 22
Ramps 3
Recorders, Industrial 33, 45
Recorders, Sound 43
Rectifiers 32, 68, 77, 84
Reels, Hose 70
Reels, Stock 60
Refrigeration Equipment 5, 62, 90, 97
Regulators, Voltage 23
Relays 26, 59, 61, 89, 92
Reproduction Equipment 12, 16, 35, 37, 68
Resistors 15, 17, 33
Respirators 8, 59
Rings 54, 75, 88
Riveting Equipment 60
Rolls 51, 93
Roofing Materials 92
Rubber Products 52, 74

S

Safety Equipment 5, 9, 26, 61, 63, 82
Saw Accessories 16a
Saw Blades 73, 85
Saws, Wood & Metal 9, 28, 39, 50, 50, 64, 68, 73, 83
Scaffolding 48
Scales ... 27, 36, 50, 52, 54, 90
Screening Equipment 16a, 18, 96
Seals 11, 47
Shears 2, 52, 61, 81
Shop Equipment 1, 12, 43, 45, 52, 70
Shredders 86
Signals 91
Signs 25
Slings 8, 11
Soledring Equipment 3, 10, 34, 71, 82, 98
Speed Reducers ..12, 15, 49, 93
Spray Equipment 49, 87
Springs 39, 45, 75, 76, 90
Stampings ...37, 65, 75, 79, 82
Stapling Equipment 73
Steel 4
Steel, Tool 20, 87
Strainers 13, 30, 35
Strapping, Steel 72
Strip, Prefinished Metal 86

T

Tacker, Hand 31
Tachometers 25
Tags 64
Tank Heads 32
Tape, Industrial 3, 26, 53
Taps 40
Tapping Attachment 16b
Telephone Booths, Acoustic.. 58
Testing Equipment ..... 11, 16a, 18, 20, 30, 39, 41, 51, ...64, 71, 73, 85, 90
Thermometers 24, 84
Thread Restorer 93
Timing Devices 9, 34, 39, 51, 60, 74, 89, 95
Tires, Industrial 45, 53, 77
Tools, Carbide 11, 51, 58
Tools, Cleaning 11
Tools, Cutting 36
Tools, Hand 14, 69, 86
Tools, Pneumatic 35, 56, 89, 97
Tools, Portable Electric 9, 13, 44, 47, 56, 97, 98
Tractor, Hoist 93
Tractors, Industrial ..36, 51, 76
Transformers 18,45, 62, 92
Traps, Steam 25
Trolleys 31
Trucks, Hand 16a, 24, 40, 57, 66, 69, 72, 76, 86
Trucks, Industrial Power 1, 17, 19, 22, 38, 40, 47, 52, 76, 79
Tube Fabricating Equipment 16, 50
Tubing & Fittings 43, 62, 78, 80, 83, 88, 89

V

Valves... 5, 40, 42, 57, 88, 95
Vending Machine 5, 16b
Ventilating Equipment 4, 6
Vibration Absorbers 43, 87, 88
Vibrating Equipment 24, 32, 61, 74, 91
Vises 29

W

Wardrobe Equipment 19, 37, 72
Washers 65
Washroom Equipment 21
Water Treatment 10, 27, 72, 93
Waterproofing Material 7, 29, 69, 81
Welders, Electric 38, 55, 73, 87, 92
Welding Accessories 9, 12, 16a, 21, 44, 59, 62, 74, 88, 94
Welding & Cutting, Gas 9, 55, 88
Wheels, Industrial ...30, 33, 37
Winders, Coil 74
Winders, Spring 15
Wire Cloth & Screens 13, 21, 50, 91
Wire, Electric 81, 89
Wire Rope & Accessories 32, 33, 38
Wire Specialties 79
Wiring Accessories 4, 8, 11, 12, 21, 25, 27, 29, 44, 47, 56, 57, 59, 65, 67, 71, 72, 83, 91
Wrenches 6
Wrenches, Torque 52, 55

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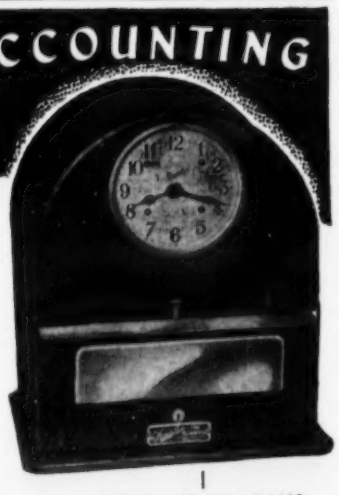


THE Simplex COST RECORDER

Registers exact starting and ending time for each job — You get accurate printed records made by the employee himself — Fully automatic operation gives fast, accurate time computation for payroll make-up.

STOPS TIME LEAKS
PRODUCES INDISPUTABLE RECORDS
REDUCES NON-PROTECTIVE TIME

SIMPLEX TIME RECORDER CO., Gardner, Mass., Dept. N11

Please give us more information on:

☐ Cost Recorder ☐ Time Cards ☐ Electric Time Stamp
☐ Watchman's Clock ☐ Time Card Files ☐ Time Card Racks

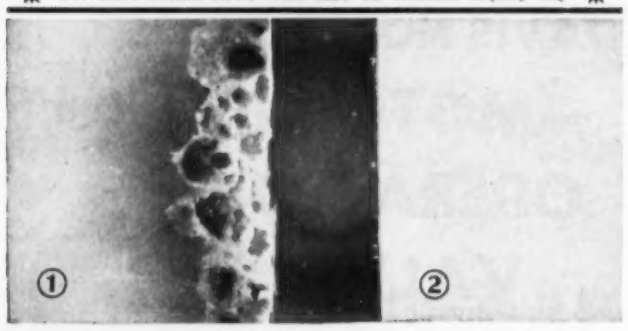
Firm.....
Name.....
Street & No.....
City..... State.....

▲ For more details circle NED-2849 on enclosed inquiry slip ▲

Speeds Up Sizing, Dedusting, Reclaiming
Put a Mighty-Mite to work and you'll minimize time and labor requirements for screening sand, candies, nuts, tumbler chips and hundreds of other materials. Safe, efficient, proven for light duty. Sizes 1½' x 4' to 2' x 8'. Send for folder, Dept. P.
Made By The Makers of SECO VIBRATING SCREENS

SCREEN EQUIPMENT CO., INC.
1752 WALDEN AVE., BUFFALO 25, NEW YORK
In Canada, United Steel Corp. Ltd., Toronto, Ont.

For more details circle NED-2850 on enclosed inquiry slip



1000° TEST PROVES "Thermalite" BEST!

Protects HOT Metal from Rust, Weather, Chemicals

Unretouched photo shows how: ① Regular heat-resisting aluminum paint discolors, blisters, flakes and burns off top half of panel when 1000° was applied directly to the surface.

② New Thermalite, with remarkable silicone ingredient, is unaffected, stays silver-bright, resists rust, weather, chemical fumes, salt spray. Brush or spray, indoors or out, on boilers, exhaust stacks, kilns, furnaces, melting pots, baking ovens. For full information on Thermalite, hottest maintenance paint on the market, write us today!

FREE! Send for your copy of the "Industrial Paint Index" —a quick, convenient reference chart for a multitude of maintenance paint applications!

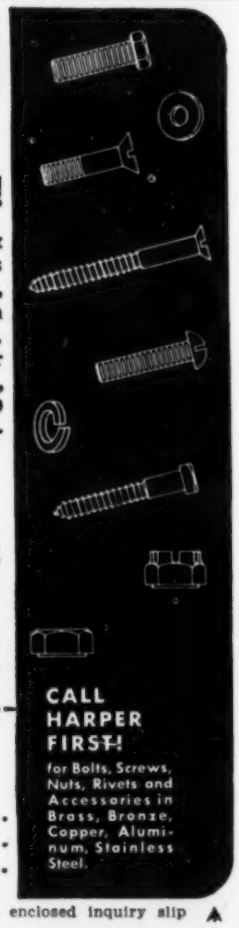
THE TROPICAL PAINT & OIL CO. — SINCE 1883
1124-1300 W. 70th St. • Cleveland 2, Ohio

For more details circle NED-2851 on enclosed inquiry slip

HARPER

Specialist in *all* Non-Corrosive Fastenings!

Call Harper *first!* America's largest producer of non-ferrous and stainless steel fastenings—specializing in bolts, screws, nuts, rivets and accessories in brass, bronze, copper, aluminum, Monel, stainless steel—to solve your problems in corrosion, heat, abrasion, stress and appearance. Over 7,000 items stocked by warehouses and distributors from coast to coast.



FREE—*this 56-page Harper Price List and Stock Book.*

HARPER
EVERLASTING FASTENINGS

The H. M. Harper Company
8212 Lehigh Ave.
Morton Grove, Ill.

Rush Harper Price List and Stock Book.
Name.....
Address.....
City.....State.....

CALL HARPER FIRST!
for Bolts, Screws, Nuts, Rivets and Accessories in Brass, Bronze, Copper, Aluminum, Stainless Steel.

For more details circle NED-2852 on enclosed inquiry slip

New Literature & Catalogs

How Aluminum Can Save Tin

Reynolds Metals Co.—Improved packaging methods that replace the ordinary "tin" can are covered in 26-page, spiral-bound booklet "How Aluminum Can Save Tin." New packages can be made on standard automatic high speed packaging equipment. Packaging materials include combinations of paper, foil, cloth and plastics. Booklet contains charts, diagrams, photographs and table comparing costs and material used in packaging 25 specific items.

For more details circle NED-2853 on enclosed inquiry slip

Technical Data Books

Lefax—Over 2000 subjects covering every known branch of engineering are listed in 1952 catalog of Pocket Size Dollar Technical Data Books. Each loose-leaf book contains about 140 pages of reference material that can be carried in the pocket right on the job. Latest additions are books on aeronautics, automatic engineering and machine design.

For more details circle NED-2854 on enclosed inquiry slip

Underdrive Presses

Danly Machine Specialties, Inc.—Placement of clutch, brake and major drive components on level below actual working area is main feature of line of single, double and triple action underdrive presses described in illustrated catalog. Maintenance and servicing are performed on separate sub-floor level and production is not interrupted. Specifications and operating features are presented.

For more details circle NED-2855 on enclosed inquiry slip

Fuses, Clips & Lubricating Devices

Trico Fuse Mfg. Co.—Merits of powder-packed renewable One-Time and plug fuses, fuse pullers, Kliplock clamps for fuse clips, Kliplok test clamps and lubricating devices are inumerated in 8-page quick reference folder series F.L.B., 300-C. Lubricating devices are segregated into handy wall chart showing types and sizes together with suggestions for proper selection and application.

For more details circle NED-2856 on enclosed inquiry slip

X-Ray Diffraction & Spectrometry

North American Philips Co., Research & Control Instruments Div.—Sixty pages of catalog "X-Ray Diffraction and Geiger Counter X-Ray Spectrometric Equipment" contain information on wide range goniometers, fluorescence analysis, universal working arrangements, Geiger tubes, electronic circuit panels and table model spectrometers. Components and accessories, electron microscopes, and other instruments are covered in detail in illustrated catalog.

For more details circle NED-2857 on enclosed inquiry slip

Engineer's Thesaurus

Over 8000 illustrations of machine elements and assembled machinery are included in 572-page "Engineer's Illustrated Thesaurus," by Herbert Herkimer. Intended to serve as guide for engineer, designer, draftsman, manufacturer or student, book identifies machine elements and explains function where necessary. An index is included to save page-thumbing. Available for $6.00 from Chemical Publishing Co., 212 Fifth Ave., New York 10, N. Y.

For more details circle NED-2858 on enclosed inquiry slip

MICO ENGRAVERS

An accurate, inexpensive and portable machine for engraving name plates and panels, forming small molds and dies, and profiling small parts. Geometrically correct for true three dimensional work. Accurately duplicates master copy in metals, plastics or wood. Rugged, sturdy construction.

COMPARE THESE SUPERIOR FEATURES
- Engraves in 2 or in 3 dimensions
- Pantograph permits 4 reduction ratios
- Micrometer depth control graduated in thousandths of an inch
- High speed, ball bearing spindle
- Chuck ⅛" to take variety of small tools, burrs, mounted points, as well as standard cutters.

Send for Illustrated Catalog

MICO INSTRUMENT COMPANY
80D Trowbridge St. Cambridge, Mass.

For more details circle NED-2859 on enclosed inquiry slip

SAVE WEAR
on MACHINE TOOLS
. . . CUTTING TOOLS

Extract Iron and Steel Particles from Coolants and Lubricating Oils with the FRANTZ FERROFILTER®

A stack of grids is magnetized by a pair of powerful Alnico permanent magnets to remove chips and particles as fine as one micron. Cleans lubricating oil to protect all wearing surfaces . . . filters coolants and cutting oils to provide finer finishes, longer pump and tool life.

Send for BULLETIN 56

S. G. Frantz Co., Inc.
P. O. Box 1138 • Trenton 6, N. J.
Manufacturers of Permanent Magnet and Electromagnetic Separators

For more details circle NED-2860 on enclosed inquiry slip

Announcing
Centr-A-Power SWITCHBOARDS

custom-built... pre-engineered...at money-saving prices

Have us send you Bulletin TEB-3 which tells you how Trumbull's new CENTR-A-POWER can give you highest quality switchboard materials and construction at lowest possible cost.

Assembled from standardized interchangeable units and troughs with a minimum of engineering, CENTR-A-POWER provides a compact and flexible "center" for all your switching.

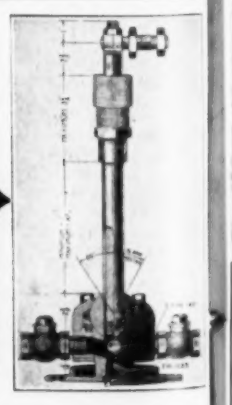
CENTR-A-POWER conveniences include greater capacity troughs—saving floor space; greater cross-section gutters—making wiring easier; quick-clip attachment of switch and breaker units—saving installation time.

Write now for Bulletin TEB-3 on CENTR-A-POWER.
THE TRUMBULL ELECTRIC MANUFACTURING COMPANY, Plainville, Conn.

TRUMBULL (T) ELECTRIC
Department of General Electric Company
Plainville, Connecticut

For more details circle NED-2861 on enclosed inquiry slip

Now you can have an oscillating/inclinable pump that will give long trouble-free service!



NUGENT Inclinable or Oscillating Pumps for Oiling Systems

900 hours of continuous operation oscillating through the full 60° angle against a pressure of 200 lbs. without showing any leakage around the ball joint! That is the result of a test conducted on a Nugent Inclinable or Oscillating Pump. The pump may be actuated by almost anything that moves—a crosshead pin, an eccentric, the end of a rotating shaft. Will work freely without binding, leakage or undue wear even on an uneven surface.

Write for complete details and descriptive literature.

NUGENT TRADE MARK Est. 1897
Wm. W. Nugent & Co., Inc.
421 N. Hermitage Ave. CHICAGO, 22, ILLINOIS

Oil Filters, Oiling and Filtering Systems, Telescopic Oilers, Oiling Devices, Sight Feed Valves, Flow Indicators . . . *Representatives in Principal Cities*

For more details circle NED-2862 on enclosed inquiry slip

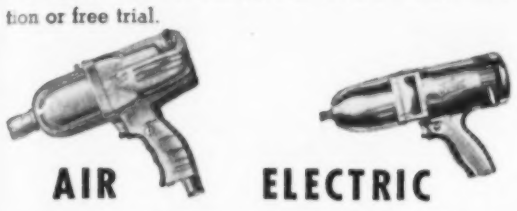
GET THE Thor STORY

ON PORTABLE POWER

IMPACT WRENCHES

Write for Catalog P-1

No matter which type of impact wrench you prefer – air or electric – Thor's amazing impact power is available in both types. Write or call your Thor branch for demonstration or free trial.



AIR ELECTRIC

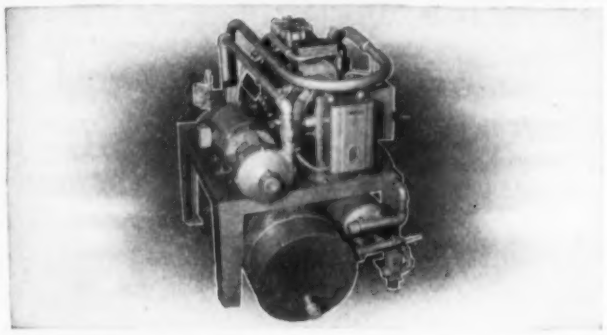
Belt Sanders, Bench Grinders, Drills, Grinders, Hammers, Impact Wrenches

Thor PORTABLE POWER TOOLS

Nibblers, Nut Setters, Polishers, Sanders, Saws, Screwdrivers

INDEPENDENT PNEUMATIC TOOL CO., AURORA, ILL.

For more details circle NED-2863 on enclosed inquiry slip



INCREASE PRODUCTION with Acme FLOW-COLD*

Faster machine tool output on grinding, drilling, honing or broaching is now possible with the Flow-Cold coolant cooler. It controls your basic variable on all metal-working operations. Friction heat is completely removed from the coolant which is maintained at a constant, even temperature.

When the utmost in production is required, Flow-Cold is the perfect answer. It is a "packaged" unit, complete in every detail yet occupies little space. Its ease of installation and dependable performance has appealed to the country's largest industrial users. They report that it has helped to increase production, tool-life and speed of operation. Write to Acme Industries, Department FC today for full information.

*Trade Mark

ACME PRODUCTS

ACME INDUSTRIES, INC.

Flow-Cold Division, JACKSON, MICH.

Continuously serving the Air Conditioning and Refrigeration Industries since 1919

For more details circle NED-2864 on enclosed inquiry slip

For Safety's Sake Use

DAYTON SAFETY LADDERS

Maintenance men everywhere rely on Dayton Safety Ladders for maximum safety and convenience. Daytons are constructed of tested airplane spruce and reinforced with rigid steel supports to give great strength and lightness of weight.

Handrails of steel guard the large roomy platform for added safety. Half of platform can be raised to form an extra step, when needed. These famous ladders can be set up instantly, are easy to carry and fold compactly for storing. Automatic locking feature insures safety while ladder is in use.

Sizes 3 feet to 16 feet in height (measured from ground to platform) with standard rubber safety shoes at no extra cost.

Write today for Bulletin No. 10

DAYTON SAFETY LADDER CO.

2339 GILBERT AVE. CINCINNATI, OHIO

In Canada—Safety Supply Company—Toronto

For more details circle NED-2865 on enclosed inquiry slip

New Literature & Catalogs

Wheel Forming Attachment

Niles-Bement-Pond Co., Pratt & Whitney Div.—The Diaform wheel forming attachment, a lightweight, portable device that provides simple method of truing complex forms on grinding wheels is subject of 8-page illustrated circular No. 543. Used on horizontal spindle surface grinders, tool and cutter grinders and universal and tool grinding machines, attachment is accurate to tenths of thousands of inch.

For more details circle NED-2866 on enclosed inquiry slip

Inclinable Presses

Clearing Machine Corp.—16-page bulletin No. 215 offers pictures, cutaway illustrations, drawings and specifications pertinent to open-back nongeared and geared inclinable presses. Presses range from 30 to 75-ton capacities for smaller models and from 100 to 200-ton capacities for the heavier machines. They perform variety of work including blanking, forming, drawing and assembly operations.

For more details circle NED-2867 on enclosed inquiry slip

Neoprene Coatings & Linings

Gates Engineering Co.—Series of three folders presents specific applications of Neoprene coatings. Bulletin N-1 covers various coatings for tanks, valves, fume protection, walks and radio housings. N-2 covers Gaco N-200-1 liquid lining for protection against abrasion and chemical corrosion. Liquid air-curing N-700 coating is detailed in bulletin N-3. Properties, application data, coverage and other information are given in each bulletin.

For more details circle NED-2868 on enclosed inquiry slip

Bakelite & Vinylite Plastics File

Bakelite Co.—Accurate descriptions of over 50 Bakelite and Vinylite plastics, their properties and uses are included in 8-page ready-reference file containing 56 photographs of representative finished products. Material is indexed under molding and extrusion materials, film and sheeting, protective coating resins, rigid sheets, calendering resins and laminating, bonding and adhesive resins.

For more details circle NED-2869 on enclosed inquiry slip

Contouring Band Machine

DoALL Co.—16-page illustrated brochure "Presenting a New Manufacturing Machine Tool" describes the Contour-matic hydraulically-operated bandtooled machine for use on many diverse industrial applications. Types of bandtools available, wide speed range, hydraulic table feed and coolant system make possible work with materials heretofore nonmachinable. Another section covers attachments for specific production jobs. Machine does conventional and high speed sawing, friction cutting, band filing and polishing, vertical line grinding and diamond sawing.

For more details circle NED-2870 on enclosed inquiry slip

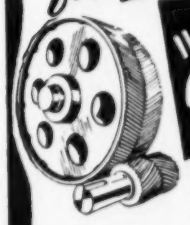
Soldering & Brazing Equipment

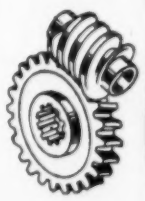
Metallizing Co. of America—"Mogul Soldering & Brazing Equipment" is title of 8-page illustrated brochure descriptive of the Mogul soldering gun. Its applications in production line soldering and brazing are shown. Gun is capable of soldering 60 lineal fpm on 5-gal rectangular can.

For more details circle NED-2871 on enclosed inquiry slip

Your Foundation.... for GOOD MACHINE PERFORMANCE—

"Industrial Gears"





Specialization counts most when it does most good. We here at Industrial Gear, can't help but make good Gears or Sprockets because that is *all* we do! We have no side lines! We cut Gears, Racks, Sprockets and Splining almost around the clock.

They're cut good—they're dependable—they function perfectly in your machines and equipment.

Call on us for big 61-inch Herringbones—down to the smallest Spur. You'll like "Industrial Gear" Service.

Write for Brochure—"A trip through Industrial".

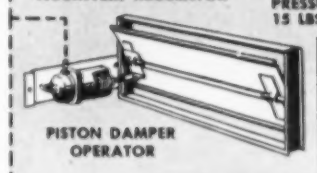
INDUSTRIAL GEAR MFG. CO. IG GEARS

Industrial Gear Mfg. Co.

4541 W. VAN BUREN ST. CHICAGO 24, ILL.

For more details circle NED-2872 on enclosed inquiry slip

ACCURATE



POWERS

HEAT REGULATOR

Unsurpassed for reliability and power to operate large or small diaphragm valves for accurate temperature control of Water Heaters, Heat Exchangers, Jacket Water for Compressors, Diesel and Gas Engines, and many industrial processes.

IMPORTANT FEATURES

• *Adjustable Sensitivity* and over-heat protection. • *Calibrated Dial* temperature adjustment. • *Ranges* 50 to 250° F. and 150 to 350° F. • *Simple, Rugged Construction* withstands vibration and insures many years of reliable service. Requires 15 lb. supply of compressed air or water for its operation. • *Small Size* — regulator head is only 2⅞" x 3⅝". Write for Bulletin 316. (a76)

THE POWERS REGULATOR CO., 3437 Oakton St., Skokie, Ill.

60 Years of Temperature and Humidity Control • Offices in Over 50 Cities

For more details circle NED-2873 on enclosed inquiry slip

Yes! AJAX Induction Melting Furnaces are Versatile!

SOME APPLICATIONS

Die Castings
Sand Castings
Permanent Mold Castings
Scrap Recovery
Billets for Rolling and Extrusion
Galvanizing and Aluminizing of Steel
Continuous Casting of Metals

AJAX-TAMA-WYATT Low Frequency Induction Furnaces are made in a wide range of sizes, from 20 to 1000 kW, to meet demand for large volume or small special lots. They are adapted to the full range of non-ferrous metals and alloys. Their use insures faster production, uniform quality, less maintenance and lower operating cost. Rejects are reduced. For special applications, an Automatic Electromagnetic Pump allows continuous feeding of molten metal into the molds as they move past. Hand ladling is eliminated. Temperature is also automatically controlled and there is no chance of overheating the bath at any time during the melting cycle.

WRITE FOR FURTHER INFORMATION

AJAX ENGINEERING CORP., TRENTON 7, N. J.

AJAX TAMA-WYATT INDUCTION MELTING FURNACE

AJAX ELECTRO METALLURGICAL CORP., and Associated Companies
AJAX ELECTROTHERMIC CORP.
AJAX ELECTRIC CO., INC.
AJAX ELECTRIC FURNACE CORP.

For more details circle NED-2874 on enclosed inquiry slip

It's Laughable, isn't it?

A WISE MAN TAKES IT WITH A GRAIN OF SALT!

BECAUSE HE KNOWS

Ruts and Holes CAN be Overcome Permanently— ONLY if you insist on the Original—

STONHARD RESURFACER

Just a ½ inch topping transforms worn concrete or wood floors into safe, resilient, dust-proof, and fire-resistant surfaces that withstand heavy industrial traffic for years to come. Find out today about our trial offer.

STONHARD COMPANY

Building Maintenance Materials Since 1922

101 Stonhard Building, 1306 Spring Garden St., Philadelphia 23, Pa.

Yes, I want details on STONHARD RESURFACER 101/3/52

Name .....

Company ..... Title .....

Address .....

City ..... Zone ..... State .....

For more details circle NED-2875 on enclosed inquiry slip

SURE Here is the positive way to remove tramp iron — install a STEARNS Electro or Permanent Magnetic pulley in your conveying system.

AUTOMATIC Placed just ahead of the sawmill fuel hogs at the Weyerhaeuser Timber Co., this STEARNS magnetic pulley removes tramp iron continuously and automatically, day in and day out.

PROTECTION Reduce down-time and lower repair costs to crushing and grinding equipment in your plant with a STEARNS magnetic pulley. Write today for literature.

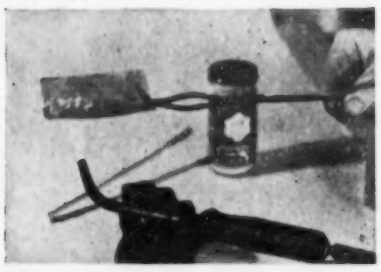
Foremost in the Magnetic Field

Stearns MAGNETIC INC.

653 SOUTH 28TH ST., MILWAUKEE 46, WIS.

For more details circle NED-2876 on enclosed inquiry slip

ALL METAL LIQUID SOLDERING FLUX



New liquid aluminum soldering flux makes possible sweating on aluminum, stainless steel, monel, copper, brass, steel or any combinations of same. The newly developed liquid chemical actually breaks the surface oxide on all types of aluminum so that a sweat job is possible in the same manner as ordinary flux on the common metals. Called Liquid ASMC Flux it makes possible the soldering together of such dissimilar metals as stainless steel to aluminum or any combinations of the above metals to aluminum or each other. When used in combination with Farrelloy All Metal Solder the Flux eliminates the electrolytic action between dissimilar metals so that a permanent bond, highly resistant to corrosion is obtained. ASMC Flux makes possible the use of induction heat as well as torch or iron. Production jobs using induction heat are now being accomplished putting two brass studs on Aluminum Name Plates at the rate of 250 per hour. Same flux when used with Farrelloy Solder is equally effective on filling in blow holes in aluminum castings, sweating name plates on cast iron, and many other jobs. ASMC Flux is priced at $3.50 per pound, fob Philadelphia. Farrelloy Solder $2.00 per pound, fob Philadelphia (14 bars to the pound). Write **Farrelloy Company, Dept. NED.** 1246 North 26th St., Philadelphia 21, Pa. *Advt.*

For more details circle NED-2877 on enclosed inquiry slip

MAXI-PICH V-BELT SHEAVES

Four reasons why—

YOU SHOULD DEMAND

"V-BELT" MAXI-PICH Stationary & Motion Control Sheaves

They're engineered for rugged performance from best grades of heat-treated steel and soft-gray iron castings.

You get every advantage of other sheaves **plus** these 4 outstanding features—

1. MAXIMUM PITCH DIAMETER VARIATION
2. CONSTANT BELT ALIGNMENT
3. INTERCHANGEABLE BUSHINGS
4. USES COMMERCIAL V-BELT AND COMPANION SHEAVE

"V-Belt" Maxi-Pich Sheaves fit any factory machine—save installation and operating costs—speed production. For the FULL STORY, ask your "V-Belt" dealer, or write to the V-Belt Engineering Co., Richmond, Va.

V-BELT ENGINEERING COMPANY
RICHMOND, VIRGINIA

For more details circle NED-2878 on enclosed inquiry slip

New Processes & Materials

FLOOR REINFORCEMENT PLATE installed without special tools

Reinforcement and protection of concrete floor surfaces subject to heavy industrial loads can be accomplished with these 11¾-in. square floor plates made of 0.068-in. hot-rolled steel. Plates can be installed as new floor or over old floors without special tools. Each plate has 100 barbed prongs, ¾ in. long, which anchor it firmly to concrete. Rounded edges form flange that becomes imbedded in floor, adding to rigidity. Plates are installed one for every square foot of floor area. Packaged in cartons of 20, plates are available in limited supply from **Acme Steel Co.,** 2822 Archer Ave., Chicago 8, Ill.

For more details circle NED-2879 on enclosed inquiry slip

CONCRETE PAINT for cement block, brick and stone

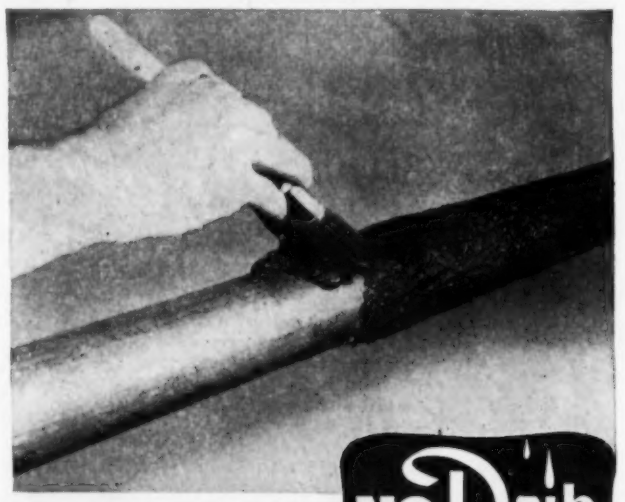
Applied without primers or sealers, Smooth-On No. 15 concrete paint is usable on exterior or interior concrete, cement block, brick or stone surfaces. It can be applied on painted or unpainted, dry or damp surfaces. One gallon covers about 400 sq ft, and one coat is usually sufficient. Paint has high resistance to water, acid or alkaline attack and can be washed without damage to finish. Color is medium gray. Made by **Smooth-On Mfg. Co.,** Dept. NE, 570 Communipaw Ave., Jersey City 4, N. J.

For more details circle NED-2880 on enclosed inquiry slip

PLASTIC AIR FILTER traps even cigaret smoke solids

Washable plastic air filter for forced draft hot air furnaces and air conditioning systems is capable of catching pollen from air and even most minute solids in cigarette smoke. Material used in filter is thin polyethylene film shredded into porous mass which when exposed in current of air picks up electrostatic charge. Charge attracts and retains finest dust or smoke particles. Filter can be cleaned over and over again by simply rinsing in cold water. It is then drained for several minutes and restored to service while still damp. Product is in limited production, but will be available to heating and ventilating concerns. Made by **Goodyear Tire & Rubber Co.,** 1144 E. Market St., Akron 16, O.

For more details circle NED-2881 on enclosed inquiry slip



COVER PIPES TANKS, WALLS NoDrip

Anyone can brush, trowel or spray NoDrip on any clean, dry surface. Goes on like plaster, forms a seamless, protective coating, *STOPS CONDENSATION DRIP.*

NoDrip keeps equipment and floors safe and dry; prevents corrosion of metal and prolongs its life. Acid, alkali and brine resistant. Comes in 1, 5 and 55 gal. drums, ready for use.

TRY NoDRIP—Apply NoDrip to a small area, compare the results with uncovered portions.

Send for NoDrip Handbook

J. W. MORTELL CO.
526 BURCH ST. KANKAKEE, ILL.

For more details circle NED-2882 on enclosed inquiry slip

50% MORE POWER!

That's what this speedy, new B&D SCRUGUN has to boost its capacity from #10 to #12 wood screws! And it also gives you a new handle shaped for plenty of finger room—light weight (only 3¾ lbs.), and amazing compactness (only 9" overall) to cut fatigue—husky, high-quality parts for *continuous* operation! See your nearby B&D Distributor for a demonstration. WRITE FOR FREE LITERATURE to: The Black & Decker Mfg. Co., 662 Pennsylvania Ave., Towson 4, Md.

LEADING DISTRIBUTORS EVERYWHERE SELL

Black & Decker PORTABLE ELECTRIC TOOLS

* Trade Mark Reg. U. S. Pat. Off.

For more details circle NED-2883 on enclosed inquiry slip

Problem:

How to obtain controlled weld area and reduce costly fabrication of end to end welded circuit breaker parts

General Plate

Provided the solution with Steel edgebonded to TRUFLEX® thermostat metal — a Composite Metal

A leading manufacturer of circuit breakers had the problem of bonding a steel armature to a thermostat metal element. Individual butt welding of the small pieces was impractical due to the high cost to flash removal, and need of numerous inspections.

The problem was submitted to General Plate whose engineers quickly provided the solution by edge bonding steel to a Truflex thermostat metal ingot and then rolling the combination down to the proper size. As illustrated in the photograph, the result was a composite metal that was easily fabricated, gave the performance required and reduced costs considerably.

No matter what your problem, it will pay you to consult with General Plate. Their vast experience in cladding precious to base metals, or base to base metals can overcome your problems . . . often reduce costs. Have you a Composite Metal Problem? General Plate can solve it for you. Write for information.

GENERAL PLATE
Division of Metals & Controls Corp.
83 Forest St., Attleboro, Mass.

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TEFLON IMPREGNATED ASBESTOS PACKING

The Advantages of Teflon
PLUS
Greater Resiliency
Moderate Cost

Chemically inert, heat-resistant, anti-hesive Teflon has solved many packing problems. But under certain conditions, Teflon's cold-flow characteristic causes trouble. The solution to cold-flow is Flexrock #401 braided white asbestos packing impregnated *throughout* with Teflon.

#401 offers solid Teflon's advantages *plus* superior resiliency, permitting a tight, lasting seal at low gland pressure, against *acids, alkalis and solvents.* #401 is versatile, eliminates the need for costly, machined Teflon rings. Stock it for applications demanding absolute *non-corrosion, non-contamination.* Won't "seize" a shaft or spindle; serviceable from −100°F. to 500°F. In continuous lengths, square section, from ⅛" to 1" by 1/16" increments.

We furnish a complete line of *Teflon Packing:* solid or impregnated in endless ring or continuous braided construction; *Teflon Gaskets:* solid or jacketed; *Teflon Stock:* sheets, tape, cylinders, rods, tubing, bars. *Also, special shapes.*

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FLEXROCK COMPANY
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